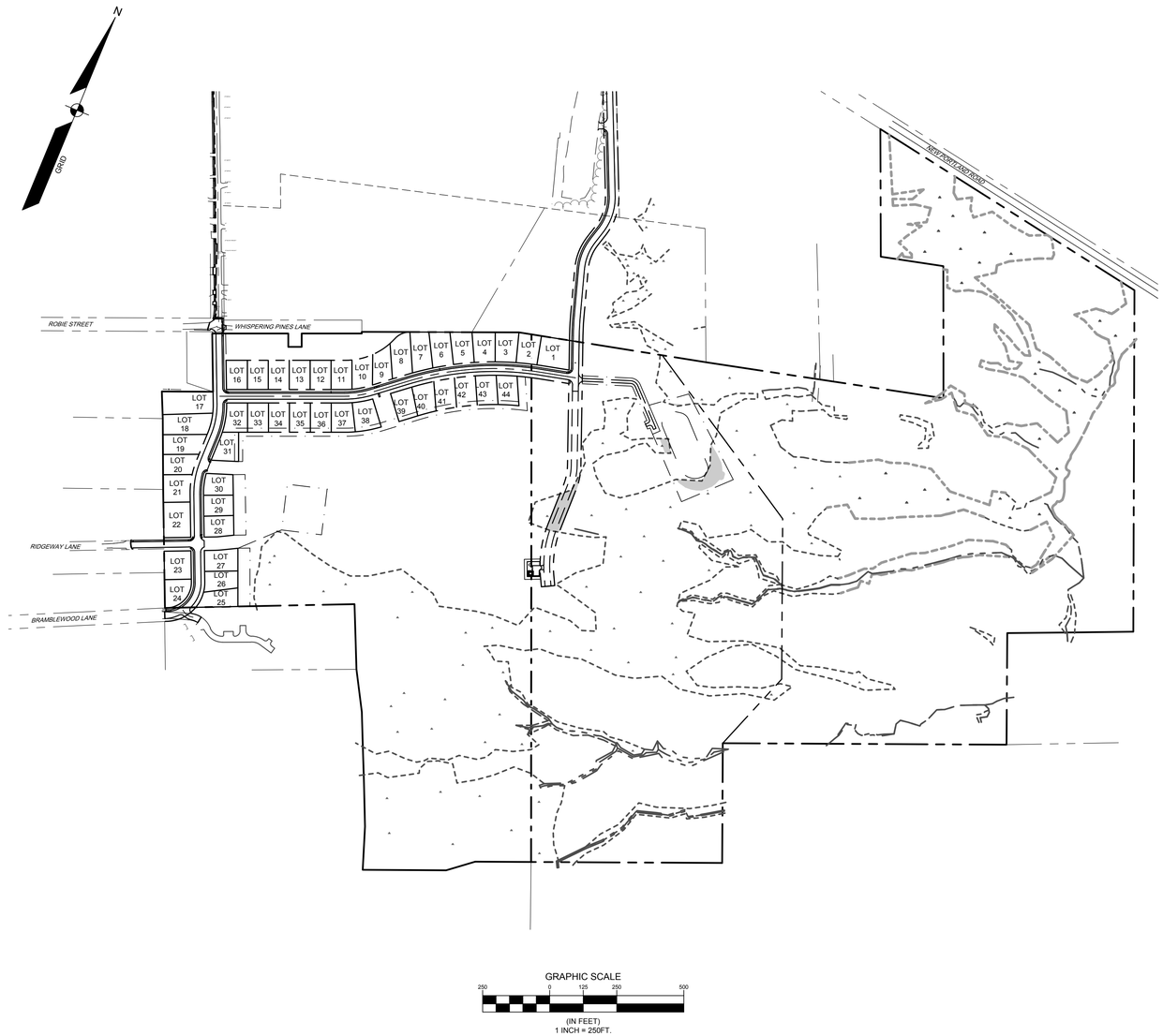
ROBIE STREET SUBDIVISION

ROBIE STREET
GORHAM, MAINE

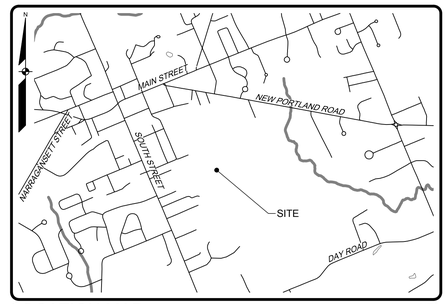
APPLICANT:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

ENGINEER/SURVEYOR/
LANDSCAPE ARCHITECT:

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100



GRAPHIC SCALE
250 0 125 250 500
(IN FEET)
1 INCH = 250FT.



LOCATION MAP NTS

SHEET INDEX

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396
STATE OF MAINE * SHAWN M. FRANK * No. 6396 * PROFESSIONAL ENGINEER * 12-21-2023

REV.	BY:	DATE:	STATUS
C.	SMF	12-21-2023	SUBMISSION TO DEP FOR STORMWATER LAW
B.	SMF	11-13-2023	PRELIMINARY SUBDIVISION COMMENT RESPONSE SUBMISSION
A.	SMF	08-21-2023	PRELIMINARY SUBDIVISION PLAN SUBMISSION TO TOWN

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

COVER SHEET
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE
FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

RECORD OWNER:
FREDERICK ROBIE, JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	1" = 250'
PROJECT	21483

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	DEED LINE/R.O.W.	
	TIE LINE	
	SETBACK	
	EASEMENT	
	BUFFER	
	FLOODPLAIN	
	FLOODWAY	
	CENTERLINE	
⊡	MONUMENT	■
◎	IRON PIPE/ROD	●
◎	DRILL HOLE	◉
C1/L1	DEED CALL	
C1/L1	CURVE/LINE NO.	C1/L1
	SOILS	
	ZONE LINE	
	ZONE LINE ON PL	
BENCHMARK DESCRIPTION WITH ELEVATION	BENCHMARK	
	SURVEY CONTROL	
TP-1	TEST PIT	
MW-1	MONITORING WELL	
B-1	BORING	
	BUILDING	
	DECK/STEPS/ OVERHANG	
	EDGE WETLAND	
	WETLANDS	
	UPLANDS	
	STREAM	
	LEDGE	
	EDGE PAVEMENT	
	PAVEMENT SAWCUT	
	EDGE CONCRETE	
	PAVEMENT PAINT	
	EDGE GRAVEL	
	CURB LINE	
	EDGE OF WATER	
	TREELINE	
120 118	CONTOURS	120
×120.00	SPOT GRADE	+120.00
	CHAIN LINK FENCE	
X	BARB WIRE FENCE	X
	STOCKADE FENCE	
	GUARD RAIL	
	STONE WALL	
	RETAINING WALL	
	DECIDUOUS TREE	X
	CONIFEROUS TREE	X
	MULCH LINE	
	BOLLARD	●
	SIGN	
	RAILROAD	
G	GAS	G
GV	GAS GATE VALVE	GV
GM	GAS METER	
G	GAS MANHOLE	
W	WATER	W
WV	WATER GATE VALVE	WV
	WATER SHUT OFF	
	HYDRANT	
W	WATER MANHOLE	
W	WELL	W
S	SANITARY SEWER	S
FM	FORCE MAIN	FM
S	SANITARY MANHOLE	
SD	STORM DRAIN	SD
UD	UNDER DRAIN	UD
D	DRAINAGE MANHOLE	
	CATCH BASIN	
OHU	OVERHEAD UTILITY	OHU
UGU	UNDERGROUND UTILITY	UGU
T	TRANSFORMER PAD	T
E	ELECTRICAL MANHOLE	E
EM	ELECTRIC METER	
H	HVAC UNIT	
T	TELEPHONE MANHOLE	
	LIGHT POLE	
	UTILITY POLE	
	GUY WIRE	
	DRAINAGE DITCH	
	EROSION CONTROL BLANKET	
	FILTER BARRIER	FB
	RIPRAP	
	CHECK DAM	
	INLET PROTECTION	
	BOULDER	
	VEGETATED BUFFER	
	STORMWATER BASIN/POND	

GENERAL NOTES

1. THE RECORD OWNER OF THE PARCELS IS FREDERICK ROBIE, JR. MARITAL TRUST BY DEED DATED MARCH 6, 2019 AND RECORDED AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS (CCRD) IN BOOK 35515, PAGE 90.
2. THE PROPERTY IS SHOWN AS LOTS 20 & 19 ON THE TOWN OF GORHAM TAX MAP 24, LOT 8 ON THE TOWN OF GORHAM TAX MAP 25, LOT 20 ON THE TOWN OF GORHAM TAX MAP 27 AND IS LOCATED IN THE URBAN RESIDENTIAL (UR) AND SUBURBAN RESIDENTIAL (SR) DISTRICT.
3. SPACE AND BULK CRITERIA FOR THE (UR) AND (SR) DISTRICT ARE AS FOLLOWS:

	WATERED/SEWERED	UNSEWERED	(SR)
NET RESIDENTIAL DENSITY:	10,000 SQ.FT	20,000 SQ.FT.	40,000 SQ.FT
MINIMUM LOT SIZE:	10,000 SQ.FT.	20,000 SQ.FT.	60,000 SQ.FT.
MINIMUM STREET FRONTAGE:	80 FEET	80 FEET	200 FEET*
MINIMUM FRONT YARD:	25 FEET	25 FEET	50 FEET: LOCAL ST.
			70 FEET: ARTERIAL ST.
MINIMUM SIDE YARD:	15 FEET*	15 FEET*	20 FEET
MINIMUM REAR YARD:	15 FEET*	15 FEET*	20 FEET
MAXIMUM BUILDING HEIGHT:	NONE	NONE	NONE
MAXIMUM BUILDING COVERAGE:	25%	25%	

* SEE ORDINANCE FOR MORE PARTICULAR INFORMATION.

4. TOTAL AREA OF PARCEL IS APPROXIMATELY 131.1 ACRES.
   A. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON FIELD WORK PERFORMED BY SEBAGO TECHNICS, INC., IN MAY, 2022. TRADITIONAL SURVEY MEANS AND METHODS SUPPLEMENTED WITH AERO-GEOMATIC/SUAS BASED PHOTOGRAMMETRY & LIDAR WERE EMPLOYED IN THE COLLECTION OF THIS TOPOGRAPHIC INFORMATION.
   B. BOUNDARY RETRACEMENT OF THE WESTERN PORTION OF THE PROJECT PARCEL HEREON IS BASED SOLELY UPON PLAN REFERENCE (5A).
   C. MONUMENTATION FOUND ON THE EASTERN PORTION OF THE LOCUS PARCEL WAS LOCATED WITH RTK/GPS.
5. PLAN REFERENCES:
   A. "STANDARD BOUNDARY SURVEY LAND ON NEW PORTLAND ROAD GORHAM, CUMBERLAND COUNTY, MAINE" FOR FREDERICK ROBIE, JR. BY ROSS BOUNDARY SURVEYS DATED JULY 2000 AND RECORD AT (CCRD) IN BOOK 200, PAGE 295.
   B. "PLAN OF PRIVATE WAY WHISPERING PINES LANE" FOR SUSAN & JOCK ROBIE, BY BH2M ON JULY 2004 AND RECORDED AT (CCRD) IN BOOK 206, PAGE 638.
   C. "STANDARD BOUNDARY SURVEY & PRIVATE WAY PLAN TOPPAN DRIVE" FOR HOWARD & ELIZABETH DOWNS BY BH2M DATED JULY 2001AND RECORDED AT (CCRD) IN BOOK 202, PAGE 2.
   D. "SUBDIVISION PLAN OF BRAMBLE WOOD LANE SUBDIVISION" FOR GREGORY MCCORMACK BY SEBAGO TECHNICS DATED APRIL 27, 2011 AND RECORDED AT (CCRD) IN BOOK 212, PAGE 234.
6. ALL WORK SHALL CONFORM TO THE APPLICABLE CODES AND ORDINANCES.
7. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIM OR HERSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIM OR HERSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
8. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND IN THE FIELD.
9. PROVIDE ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND OWNER'S REQUIREMENTS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
10. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE ENGINEER.
11. CONTRACTOR SHALL CLEAN AND REMOVE DEBRIS AND SEDIMENT DEPOSITED ON PUBLIC STREETS, SIDEWALKS, ADJACENT AREAS, OR OTHER PUBLIC WAYS DUE TO CONSTRUCTION.
12. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY IN CONSTRUCTION TO PROTECT EXISTING STRUCTURES, PHYSICAL FEATURES, AND MAINTAIN SITE STABILITY DURING CONSTRUCTION. CONTRACTOR SHALL RESTORE ALL AREAS TO ORIGINAL CONDITION AND AS DIRECTED BY DESIGN DRAWINGS.
13. SITE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION.
14. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENT CONTROL BMPS" PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY OF THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, OCTOBER 2016 OR LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.
15. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY UTILITY COMPANIES. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (811) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.
16. CONTRACTOR SHALL BE AWARE THAT DIG SAFE ONLY NOTIFIES ITS "MEMBER" UTILITIES ABOUT THE DIG. WHEN NOTIFIED, DIG SAFE WILL ADVISE CONTRACTOR OF MEMBER UTILITIES IN THE AREA. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND CONTACTING NON-MEMBER UTILITIES DIRECTLY. NON-MEMBER UTILITIES MAY INCLUDE TOWN OR CITY WATER AND SEWER DISTRICTS AND SMALL LOCAL UTILITIES, AS WELL AS USG PUBLIC WORKS SYSTEMS.
17. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS OF 23 MRSA 3360-A. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE APPROPRIATE UTILITIES TO OBTAIN AUTHORIZATION PRIOR TO RELOCATION OF ANY EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS. IF A UTILITY CONFLICT ARISES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER, THE MUNICIPALITY AND APPROPRIATE UTILITY COMPANY PRIOR TO PROCEEDING WITH ANY RELOCATION.
18. ALL PAVEMENT MARKINGS AND DIRECTIONAL SIGNAGE SHOWN ON THE PLAN SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS.
19. ALL PAVEMENT JOINTS SHALL BE SAWCUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
20. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.
21. IMMEDIATELY UPON COMPLETION OF CUTS/FILLS, THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH EROSION CONTROL NOTES AND AS SPECIFIED ON PLANS.
22. THE CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE FOR THE REMOVAL, REPLACEMENT AND RECTIFICATION OF ALL DAMAGED AND DEFECTIVE MATERIAL AND WORKMANSHIP IN CONNECTION WITH THE CONTRACT WORK. THE CONTRACTOR SHALL REPLACE OR REPAIR AS DIRECTED BY THE OWNER ALL SUCH DAMAGED OR DEFECTIVE MATERIALS WHICH APPEAR WITHIN A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.
23. ALL WORK PERFORMED BY THE GENERAL CONTRACTOR AND/OR TRADE SUBCONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF LOCAL, STATE OR FEDERAL LAWS, AS WELL AS ANY OTHER GOVERNING REQUIREMENTS, WHETHER OR NOT SPECIFIED ON THE DRAWINGS.
24. WHERE THE TERMS "APPROVED EQUAL", "OTHER APPROVED", "EQUAL TO", "ACCEPTABLE" OR OTHER GENERAL QUALIFYING TERMS ARE USED IN THESE NOTES, IT SHALL BE UNDERSTOOD THAT REFERENCE IS MADE TO THE RULING AND JUDGEMENT OF SEBAGO TECHNICS, INC.
25. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION FOR THE WORK UNTIL TURNED OVER TO THE OWNER.
26. THE GENERAL CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DRAWINGS ON SITE DURING ALL PHASES OF CONSTRUCTION FOR USE OF ALL TRADES.
27. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY CHANGES AND DEVIATION OF APPROVED PLANS NOT AUTHORIZED BY THE ARCHITECT/ENGINEER AND/OR CLIENT/OWNER.
28. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. ANY MODIFICATION TO SUIT FIELD DIMENSION AND CONDITION SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ANY WORK.
29. BEFORE THE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND MATERIALS, REPAIR OR REPLACE PRIVATE OR PUBLIC PROPERTY WHICH MAY HAVE BEEN DAMAGED OR DESTROYED DURING CONSTRUCTION, CLEAN THE AREAS WITHIN AND ADJACENT TO THE PROJECT WHICH HAVE BEEN OBSTRUCTED BY HIS/HER OPERATIONS, AND LEAVE THE PROJECT AREA NEAT AND PRESENTABLE.
30. ALL GRAVITY CONDUIT PIPES SHALL BE INSTALLED USING A PIPE LASER AND TARGET SYSTEM THROUGH THE PIPE. ON PIPE RUNS 50 FEET OR LESS, THE THE CONTRACTOR SHALL REQUEST ENGINEER'S APPROVAL TO USE A GROUND LASER.
31. SIDESLOPES SHALL NOT BE STEEPER THAN 3:1 (H:V) EXCEPT AS OTHERWISE IDENTIFIED ON THIS PLAN. ALL SIDESLOPES STEEPER THAN 3:1 (H: V) SHALL BE LINED WITH EROSION CONTROL BLANKET.
32. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FLOW THROUGH THE EXISTING CLOSED STORM DRAINAGE SYSTEM DURING CONSTRUCTION AND SHALL SUBMIT A WORK PLAN FOR APPROVAL BY THE DESIGN ENGINEER.
33. BOUNDARY INFORMATION SHOWN HEREON IS BASED UPON LIDAR DATA AVAILABLE FROM THE TOWN OF XXXXX AND AS DEPICTED IN PLAN REFERENCE 7A. THE TOPOGRAPHICAL INFORMATION SHOWN HEREON IS SOLELY BASED UPON LIDAR TOPOGRAPHICAL INFORMATION PROVIDED BY THE OWNER. SEBAGO TECHNICS, INC. MAKES NO REPRESENTATION AS TO THE ACCURACY OF THIS INFORMATION, AND THROUGH DIRECTION OF THE OWNER, HAS RELIED UPON THIS INFORMATION FOR THE DESIGN.

UTILITY DEMOLITION NOTES

1. PROTECT EXISTING BOUNDARY LINE MONUMENTATION. IF DISTURBED, EXISTING MONUMENTATION TO BE RESET BY A PROFESSIONAL LAND SURVEYOR.
2. DEMOLITION OF UTILITIES REQUIRING TREE REMOVAL SHALL BE COORDINATED WITH THE OWNER AND IN ACCORDANCE WITH PROJECT PLANS.
3. UTILITY DEMOLITION SHALL BE COMPLETED IN COORDINATION WITH NEW INFRASTRUCTURE. CONTRACTOR SHALL ENSURE EXISTING SURFACE DRAINAGE IS MAINTAINED DURING CONSTRUCTION.
4. EXISTING SEWER AND STORM DRAINAGE INFRASTRUCTURE TO REMAIN ACTIVE DURING CONSTRUCTION AND UPON COMPLETION OF PROJECT. DEMOLITION/CONSTRUCTION ACTIVITIES SHALL NOT INTERFERE OR IMPEDE EXISTING FLOWS. CONTRACTOR SHALL PROVIDE BYPASS PUMPING AS REQUIRED DURING SEWER AND STORM DEMOLITION AND NEW CONSTRUCTION. DAMAGE TO EXISTING SEWER INFRASTRUCTURE SHALL BE REPAIRED BY CONTRACTOR AT THEIR EXPENSE.
5. DEMOLITION SHOWN IS FOR MAJOR SITE ELEMENTS TO BE DEMOLISHED. OTHER MINOR DEMOLITION MAY BE REQUIRED AS PART OF CONSTRUCTION AND SHALL BE CONSIDERED INCIDENTAL TO THE COST OF CONSTRUCTION. COORDINATE ALL DEMOLITION WORK WITH SITE AND BUILDING DRAWINGS.
6. PRIOR TO ANY DEMOLITION, THE CONTRACTOR SHALL SUBMIT A SEQUENCE OF DEMOLITION PLANS TO THE OWNER. THIS PLAN SHALL DEPICT LOCATIONS OF PROPOSED TERMINATIONS AND ANY TEMPORARY SERVICES THAT WILL BE NEEDED.
7. CONTRACTOR REQUIRED TO CONFIRM/MAINTAIN BENCHMARKS. IF IMPACTED CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION/RELOCATION AND COORDINATION WITH PROJECT TEAM.

GRADING & EROSION NOTES

1. SIDESLOPES SHALL NOT BE STEEPER THAN 3:1 (H:V) EXCEPT AS OTHERWISE IDENTIFIED ON THIS PLAN. ALL SIDESLOPES STEEPER THAN 3:1 (H: V) SHALL BE LINED WITH EROSION CONTROL BLANKET, OR ADDITIONAL MEASURES AS INDICATED.
2. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENT CONTROL BMPS" MANUAL PUBLISHED BY BUREAU OF LAND AND WATER QUALITY MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.
3. ALL AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE LOAM AND SEED PER DETAIL.
4. SEE UTILITY DRAWINGS FOR PIPE AND STRUCTURE DATA TABLES.

CONSTRUCTION PLAN

1. PROVIDE EROSION CONTROL MEASURES PRIOR TO SITE DISTURBANCE.
2. WETLANDS, ASSOCIATED SETBACKS AND STREAM SETBACKS TO BE STAKED BY OWNER PRIOR TO SITE DISTURBANCE.
3. BEFORE TREE CLEARING, REFER TO PLANS FOR WOODED BUFFER LOCATIONS. TREES SHALL NOT BE CLEARED WITHIN DESIGNATED WOODED BUFFER AREAS.
4. GRADING AND CLEARING LIMITS SHALL NOT ENCROACH ON ADJACENT PROPERTIES UNLESS NOTED OTHERWISE ON THE PLANS.
5. OPEN AREAS SHALL BE LIMITED TO AREAS BEING WORKED IN. THE AREA STRIPPED OF EXISTING VEGETATION AT ANY GIVEN TIME SHALL BE MINIMIZED AND BE PHASED WHERE PRACTICAL SO THAT AREAS ARE REVEGETATED AND PERMANENTLY STABILIZED BEFORE ADDITIONAL AREAS ARE STRIPPED OF EXISTING VEGETATION. CONSTRUCTION BY USE OF RIPRAP, SEED, MULCH, OR OTHER GROUND COVER WITHIN ONE WEEK FROM THE TIME IT WAS ACTIVELY WORKED. SURFACES SHALL BE STABILIZED PRIOR TO DIRECTING STORMWATER RUNOFF TOWARD STORMWATER BMPS. PLEASE REFER TO DRAINAGE PLANS FOR WATERSHED AREAS.

UTILITY NOTES

1. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION AND/OR EXCAVATION. PROTECT EXISTING ONSITE SEWER PIPE AND ADJUST MANHOLE RIMS TO GRADE WHERE APPLICABLE.
2. ALL GRAVITY CONDUIT PIPES SHALL BE INSTALLED USING A PIPE LASER AND TARGET SYSTEM THROUGH THE PIPE. ON PIPE RUNS 50 FEET OR LESS, THE CONTRACTOR SHALL REQUEST ENGINEER'S APPROVAL TO USE OR NOT USE A GROUND LASER.
3. MAINTAIN MINIMUM 5'-6" OF COVER ABOVE TOP OF WATER SERVICE PIPE.
4. MAINTAIN MINIMUM 10 FEET HORIZONTAL SEPARATION BETWEEN WATER SERVICES AND OTHER UTILITIES. MAINTAIN MINIMUM 18 INCHES VERTICAL SEPARATION BETWEEN WATER SERVICES AND OTHER UTILITIES.
5. LOWER OR RAISE WATER SERVICES AS REQUIRED TO MAINTAIN MINIMUM 12 INCH VERTICAL SEPARATION FROM OTHER UTILITIES. WATER SERVICES CROSSING SEWERS SHALL BE PROVIDE 12 INCH MINIMUM SEPARATION BETWEEN THE BOTTOM OF WATER LINE AND TOP OF SEWER UNLESS NOTED OTHERWISE ON THE PLANS.
6. PIPE:
   - SEWER PIPE SHALL BE SDR 35 PVC OR APPROVED EQUAL.
   - FORCEMAIN PIPE SHALL BE DR-11 HDPE OR APPROVED EQUAL.
   - STORMDRAIN SHALL BE ADS N-12 DUAL WALL HDPE PIPE WITH SMOOTH-WALLED INTERIOR OR APPROVED EQUAL UNLESS NOTED OTHERWISE ON THE UTILITY PLANS.
   - WATER PIPE AND FITTINGS SHALL CONFORM TO PORTLAND WATER DISTRICT WATER PIPING SPECIFICATIONS. MAIN WATER SERVICE PIPE SHALL BE DUCTILE IRON, CLASS 52 PUSH-ON PIPE MEETING THE REQUIREMENTS OF AWWA/ANSI C-111/A21.11 (LATEST REVISION). PIPE SHALL BE CEMENT-LINED AWWA/ANSI C104/A21.4 WITH LINING TWICE THE THICKNESS SPECIFIED, AND COATED TWICE WITH A BITUMINOUS SEAL COATING. PROVIDE THRUST BLOCKS AT ALL WATER SERVICE BENDS.
7. COORDINATE FOUNDATION UNDERDRAIN LOCATIONS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
8. COORDINATE GREASE INTERCEPTOR LOCATIONS WITH ARCHITECTURAL & PLUMBING DRAWINGS.
9. COORDINATE UTILITY INVERTS AT BUILDING WITH ARCHITECTURAL, STRUCTURAL AND PLUMBING DRAWINGS.
10. COORDINATE LOCATION OF SEWER, WATER, GAS, FOUNDATION DRAINS AND ROOF DRAIN INVERTS AT THE BUILDING WITH ARCHITECTURAL DRAWINGS.
11. WATER SERVICE ENTRANCE DESIGNS TO INCLUDE METERS AND BACKFLOW PREVENTERS TO MEET ALL STANDARDS AND REQUIREMENTS OF THE PORTLAND WATER DISTRICT.
12. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY GRADE CHANGES THAT WILL IMPACT STORM DRAINAGE INFRASTRUCTURE OR OTHER UTILITIES.
13. UTILITIES WITHIN 5 FEET FROM FACE OF BUILDING ARE COORDINATED ON RELEVANT M.E.P. DRAWINGS. CONTRACTOR SHALL COORDINATE INVERTS, CONNECTIONS AND MATERIALS WITH ALL DRAWINGS.
14. CONTRACTOR SHALL FURNISH AND INSTALL TRENCHING, MATERIALS AND BACKFILL FOR ALL UTILITIES. ELECTRICAL AND TELECOM/DATA PROVIDERS WILL PULL PRIMARY SERVICE TO TRANSFORMER AND PANEL. CONTRACTOR RESPONSIBLE FOR TIMING AND COORDINATION WITH UTILITIES AND DRAWINGS. COORDINATE WITH ELECTRICAL DRAWINGS FOR CONDUIT SCHEDULE, TYPE AND SIZES.
15. COORDINATE ALL WATER RELATED WORK WITH PORTLAND WATER DISTRICT.
16. UTILITY CONTACTS:
    ELECTRIC:
    CENTRAL MAINE POWER (CMP)
    VAN A. HOBGOOD, DISTRIBUTION ENGINEERING
    (207) 490-3075
    WATER:
    PORTLAND WATER DISTRICT
    ROBERT BARTELS, ENGINEER
    (207) 774-5961
    FAIRPOINT:
    RICHARD JENSEN
    (207) 797-1015

LANDSCAPE NOTES

1. PLANT QUANTITIES SHOWN ON PLANT LISTS ARE FOR CONVENIENCE TO THE CONTRACTOR ONLY. THE CONTRACTOR IS RESPONSIBLE FOR ALL PLANT MATERIAL INSTALLATION AS SHOWN ON PLANS.
2. SIZE AND GRADING STANDARDS OF PLANT MATERIALS SHALL CONFORM TO THE LATEST EDITION OF "U.S.A. STANDARD FOR NURSERY STOCK," BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
3. ALL PLANT MATERIAL SHALL BE FREE FROM INSECTS AND DISEASE.
4. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING, STAKING OR GUYING, WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE BY THE OWNER.
5. PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR BY THE CONTRACTOR AND A PERIOD OF TWO YEARS THEREAFTER BY THE OWNER FROM DATE OF INSTALLATION, DURING THE ONE YEAR GUARANTEE PERIOD, DEAD PLANT MATERIAL SHALL BE REPLACED AT NO COST TO THE OWNER. AT THE END OF THE ONE YEAR PERIOD, THE CONTRACTOR SHALL OBTAIN FINAL ACCEPTANCE FROM THE OWNER.
6. ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.
7. EXISTING TREES TO BE PRESERVED WILL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
8. THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF THE UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES, PAVING, WALKS, CURBING, ETC. DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO THE OWNER.
9. ALL SHRUB BEDS SHALL BE MULCHED WITH 3" CLEAN SHREDDED DARK BROWN BARK MULCH.
10. THE CONTRACTOR SHALL PROVIDE 4" LOAM FOR ALL AREAS TO BE SODDED OR SEEDED. PLANTING AREAS SHALL RECEIVE 12" ROLLED THICKNESS OF LOAM. THE LANDSCAPE CONTRACTOR SHALL COORDINATE SUBGRADE PREPARATION WITH THE GENERAL CONTRACTOR PRIOR TO PLACING LOAM.
11. ANY DEVIATION FROM THE LANDSCAPE PLAN, INCLUDING PLANT LOCATION, SELECTION, SIZE, QUANTITY OR CONDITION SHALL BE REVIEWED AND APPROVED BY THE OWNER AND LANDSCAPE ARCHITECT (AND MUNICIPAL AUTHORITY, IF APPLICABLE) PRIOR TO INSTALLATION ON SITE.
12. WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR PERENNIAL AND ANNUAL FLOWER BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL-ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.

TYPICAL ABBREVIATIONS

AC	ACRE
AFG	ABOVE FINISH GRADE
APPROX.	APPROXIMATELY
BC	BOTTOM OF CURB
BCC	BITUMINOUS CONCRETE CURB
BIT	BITUMINOUS
BLDG	BUILDING
BW	BOTTOM OF WALL
CB	CATCH BASIN
CONC	CONCRETE
CONT	CONTINUOUS
DI	DUCTILE IRON
DIA	DIAMETER
DMH	DRAIN MANHOLE
E.W.	EACH WAY
ELEV	ELEVATION
FFE	FINISH FLOOR ELEVATION
FIN. GR.	FINISH GRADE
FTG	FOOTING
HDPE	HIGH DENSITY POLYETHYLENE
HGT	HEIGHT
HMA	HOT MIX ASPHALT
INV	INVERT
LF	LINEAR FEET
OC	ON CENTER
PVC	POLYVINYL CHLORIDE
PWD	PORTLAND WATER DISTRICT
R	RADIUS
R.O.W.	RIGHT OF WAY
S.F.	SQUARE FEET
SCH	SCHEDULE
SCSC	SLIPFORM CONCRETE SLOPED CURB
SCVC	SLIPFORM CONCRETE VERTICAL CURB
SD	STORM DRAIN
SGC	SLOPED GRANITE CURB
SMH	SEWER MANHOLE SPECS SPECIFICATIONS
SS	SANITARY SEWER
SSGC	SALVAGED SLOPED GRANITE CURB
SVGC	SALVAGED VERTICAL GRANITE CURB
TC	TOP OF CURB
TW	TOP OF WALL
TYP.	TYPICAL
VGC	VERTICAL GRANITE CURB
VIF	VERIFY IN FIELD

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396

STATE OF MAINE · SHAWN M. FRANK · No. 6396 · PROFESSIONAL ENGINEER · 12-21-2023

REV.	BY	DATE:	STATUS:
A.	SMF	08-21-2023	PRELIMINARY SUBDIVISION PLAN SUBMISSION TO TOWN
B.	SMF	11-13-2023	PRELIMINARY SUBDIVISION COMMENT RESPONSE SUBMISSION
C.	SMF	12-21-2023	SUBMISSION TO DEP FOR STORMWATER LAW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AS PERMITTED BY OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

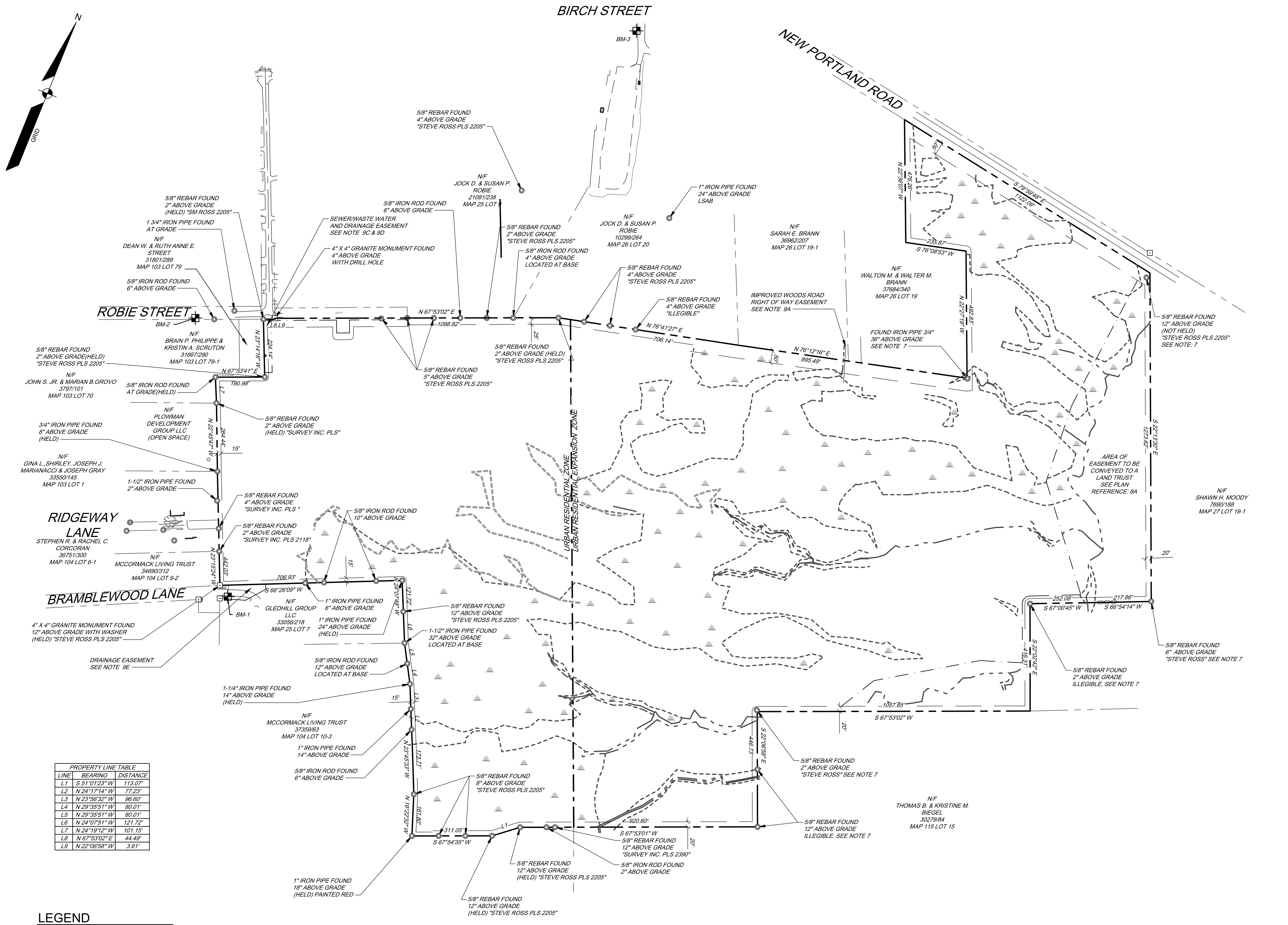
SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

NOTES & LEGEND
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE
FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

RECORD OWNER:
FREDERICK ROBIE,JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	NTS
PROJECT	21483

SHEET 2 OF29

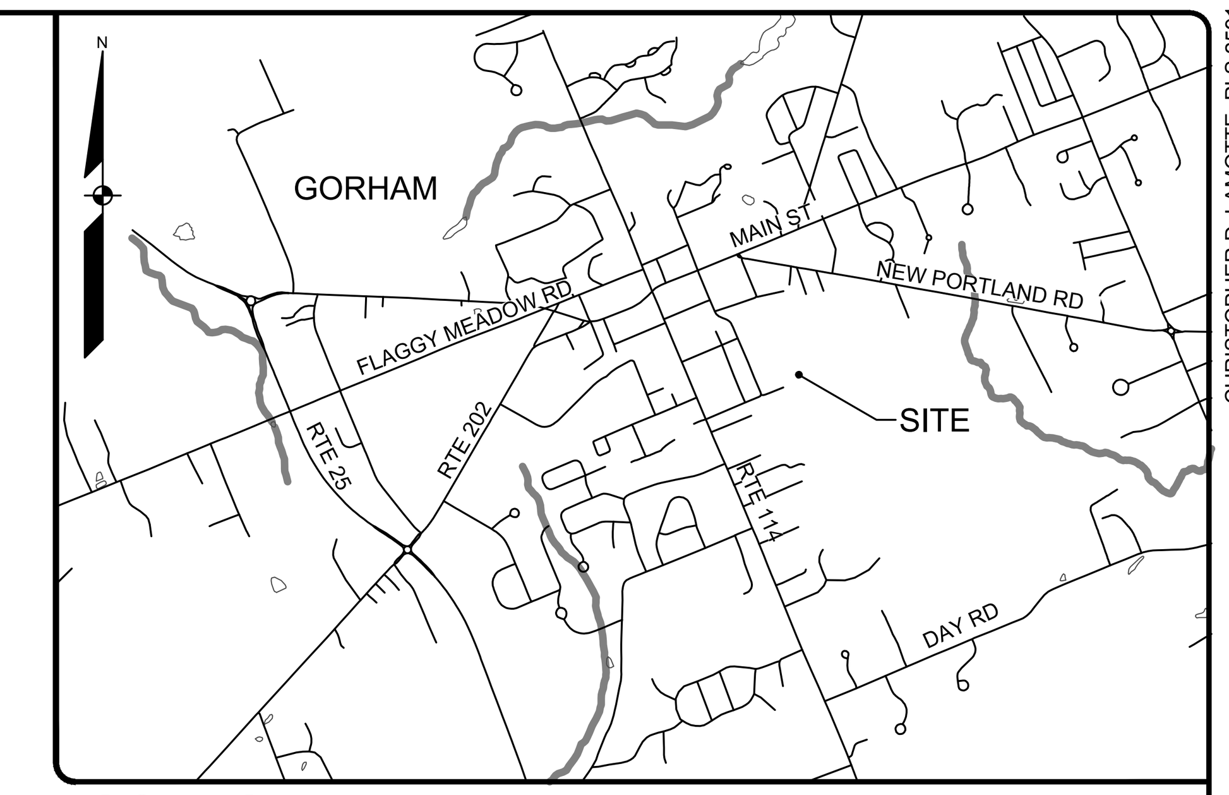


PROPERTY LINE TABLE		
LINE	BEARING	DISTANCE
L1	S 51°01'23" W	113.07'
L2	N 24°17'14" W	77.23'
L3	N 23°56'32" W	96.60'
L4	N 29°35'51" W	80.01'
L5	N 29°35'51" W	80.01'
L6	N 24°07'51" W	121.72'
L7	N 24°19'12" W	101.15'
L8	N 67°53'02" E	44.49'
L9	N 22°06'58" W	3.61'

LEGEND

EXISTING

— — —	PROPERTY LINE/R.O.W.
— — —	ABUTTER LINE/R.O.W.
— · —	EASEMENT
⊡	MONUMENT
◎	IRON PIPE/ROD
C1/L1	CURVE/LINE NO.
N/F	NOW OR FORMERLY
— - —	ZONE LINE
✚ BM-1	BENCHMARK
——	EDGE PAVEMENT
—□—	STOCKADE FENCE
- - - -	EDGE WETLAND
⫫	WETLANDS
— - - —	STREAM



LOCATION MAP

N.T.S.

GENERAL NOTES:

1. THE RECORD OWNER OF THE PARCELS IS FREDERICK ROBIE, JR. MARITAL TRUST BY DEED DATED MARCH 6, 2019 AND RECORDED AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS (CCRD) IN BOOK 35515, PAGE 90.
2. THE PROPERTY IS SHOWN AS LOTS 20 & 19 ON THE TOWN OF GORHAM TAX MAP 24, LOT 8 ON THE TOWN OF GORHAM TAX MAP 25, LOT 20 ON THE TOWN OF GORHAM TAX MAP 27 AND IS LOCATED IN THE URBAN RESIDENTIAL (UR) AND SUBURBAN RESIDENTIAL (SR) DISTRICT.
3. SPACE AND BULK CRITERIA FOR THE (UR) AND (SR) DISTRICT ARE AS FOLLOWS:

	UR/WATERED/SEWERED	UR/UNSEWERED	(SR)
NET RESIDENTIAL DENSITY:	10,000 SQ.FT	20,000 SQ.FT.	40,000 SQ.FT
MINIMUM LOT SIZE:	10,000 SQ.FT.	20,000 SQ.FT.	60,000 SQ.FT.
MINIMUM STREET FRONTAGE:	80 FT.	80 FT.	200 FT.*
MINIMUM FRONT YARD:	25 FT.	25 FT.	50 FT: LOCAL ST.
			70 FT: ARTERIAL ST.
MINIMUM SIDE YARD:	15 FT.*	15 FT.*	20 FT.
MINIMUM REAR YARD:	15 FT.*	15 FT.*	20 FT.
MAXIMUM BUILDING HEIGHT:	NONE	NONE	NONE
MAXIMUM BUILDING COVERAGE:	25%	25%	

* SEE ORDINANCE FOR MORE PARTICULAR INFORMATION.

4. TOTAL AREA OF PARCEL IS APPROXIMATELY 131.1 ACRES.
5. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON FIELD WORK PERFORMED BY SEBAGO TECHNICS, INC. IN MAY, 2022. TRADITIONAL SURVEY MEANS AND METHODS SUPPLEMENTED WITH AERO-GEOMATIC/SUAS BASED PHOTOGRAMMETRY & LIDAR WERE EMPLOYED IN THE COLLECTION OF THIS TOPOGRAPHIC INFORMATION.
6. BOUNDARY RETRACEMENT OF THE WESTERN PORTION OF THE PROJECT PARCEL HEREON IS BASED SOLELY UPON PLAN REFERENCE (5A).
7. MONUMENTATION FOUND ON THE EASTERN PORTION OF THE LOCUS PARCEL WAS LOCATED WITH RTK/GPS.
8. PLAN REFERENCES:
   A. "STANDARD BOUNDARY SURVEY LAND ON NEW PORTLAND ROAD GORHAM, CUMBERLAND COUNTY, MAINE" FOR FREDERICK ROBIE, JR. BY ROSS BOUNDARY SURVEYS DATED JULY 2000 AND RECORD AT (CCRD) IN BOOK 200, PAGE 295.
   B. "PLAN OF PRIVATE WAY WHISPERING PINES LANE" FOR SUSAN & JOCK ROBIE, BY BH2M ON JULY 2006 AND RECORDED AT (CCRD) IN BOOK 206, PAGE 638.
   C. "STANDARD BOUNDARY SURVEY & PRIVATE WAY PLAN TOPPAN DRIVE" FOR HOWARD & ELIZABETH DOWNS BY BH2M DATED JULY 2001 AND RECORDED AT (CCRD) IN BOOK 202,PAGE 2.
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9. EASEMENTS:
   A. RIGHT OF WAY TO FREDERICK ROBIE, JR. FROM WALTON M. BRANN & PATRICIA A. BRANN DATED OCTOBER 2006 AND RECORD AT (CCRD) IN BOOK 16945, PAGE 346.
   B. RIGHT OF WAY TO FREDERICK ROBIE, JR., FROM JOCK D. ROBIE & SUSAN P. ROBIE OCTOBER 2006 AND RECORDED AT (CCRD) IN BOOK 24457, PAGE 290.
   C. SEWER/WASTEWATER TO PORTLAND WATER DISTRICT FROM FREDERICK ROBIE, JR., DATED MARCH 1987 AND RECORDED AT (CCRD) IN BOOK 7655, PAGE 143.
   D. CULVERT/DRAINAGE TO THE INHABITANTS OF THE TOWN OF GORHAM FROM FREDERICK ROBIE, JR., DATED SEPTEMBER, 2008 AND RECORDED AT (CCRD) IN BOOK 26348, PAGE 54.
   E. DRAINAGE DATED FEBRUARY, 2012 AND RECORDED AT (CCRD) IN BOOK 29377, PAGE 31.
10. PLAN ORIENTATION IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83, ELEVATIONS DEPICTED HEREON ARE NAVD88, BASED ON DUAL FREQUENCY GPS OBSERVATIONS.
11. BENCHMARK:

BM-1	HYDRANT BONNET BOLT ROAD FACE	ELEVATION: 224.19 ft.(NAVD88)
BM-2	HYDRANT BONNET BOLT ROAD FACE	ELEVATION: 227.08 ft.(NAVD88)
BM-3	HYDRANT BONNET BOLT ROAD FACE	ELEVATION: 194.11 ft.(NAVD88)

12. UTILITY INFORMATION DEPICTED HEREON, UNLESS OTHERWISE NOTED, IS OF QUALITY LEVEL D PER AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD CI/ASCE 38-02. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION AND/OR EXCAVATION.
13. THE LOCUS PROPERTY AS DEPICTED HEREON DOES NOT FALL WITHIN A SPECIAL FLOOD HAZARD AREA AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR GORHAM, MAINE, CUMBERLAND COUNTY, COMMUNITY-PANEL NUMBER 2300470025B, HAVING AN EFFECTIVE DATE OF OCTOBER 15,1981.THE LOCUS FALLS WITHIN AN AREA IDENTIFIED AS ZONE C, AREAS OF MINIMAL FLOODING.
14. A WETLAND DELINEATION WAS PERFORMED ON THIS PROJECT SITE IN MAY TO JULY 2022 BY ANNA K. BIDDLE, L.S.S. AND COLE PETERS, P.W.S. OF SEBAGO TECHNICS, INC. THIS DELINEATION CONFORMS TO THE STANDARDS AND METHODS OUTLINED IN THE 1987 WETLANDS DELINEATION MANUAL AND NORTHEAST REGIONAL SUPPLEMENT AUTHORED AND PUBLISHED BY THE U.S. ARMY CORPS OF ENGINEERS. WETLAND FLAGS WITHIN PROPOSED DEVELOPMENT AREAS WERE LOCATED BY GROUND SURVEY. WETLAND FLAGS OUTSIDE OF PROPOSED DEVELOPMENT AREA WERE LOCATED USING GLOBAL POSITIONING SYSTEMS (GPS) TECHNOLOGY CAPABLE OF SUBMETER ACCURACY.

    A VERNAL POOL SURVEY WAS PERFORMED DURING APRIL AND MAY OF 2022 BY ANNA K. BIDDLE, L.S.S. AND COLE PETERS P.W.S. OF SEBAGO TECHNICS, INC. THIS SURVEY CONFORMS TO THE STANDARDS AND METHODS OUTLINED IN CHAPTER 335, SECTION 9, OF THE NATURAL RESOURCE PROTECTION ACT, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION.
15. SUPPLEMENT WETLAND INFORMATION WAS IDENTIFIED BY ALBERT FRICK ASSOCIATES, INC IN 2007.

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

CHRISTOPHER D. LAMOTTE, PLS 2591

REV:	BY:	DATE:	STATUS:
C	SMF	12-21-2023	SUBMISSION TO DEP FOR STORMWATER LAW
B	SMF	11-13-2023	PRELIMINARY SUBDIVISION COMMENT RESPONSE SUBMISSION
A	SMF	08-21-2023	PRELIMINARY SUBDIVISION PLAN SUBMISSION TO TOWN

SEBAGO
TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
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BOUNDARY SURVEY

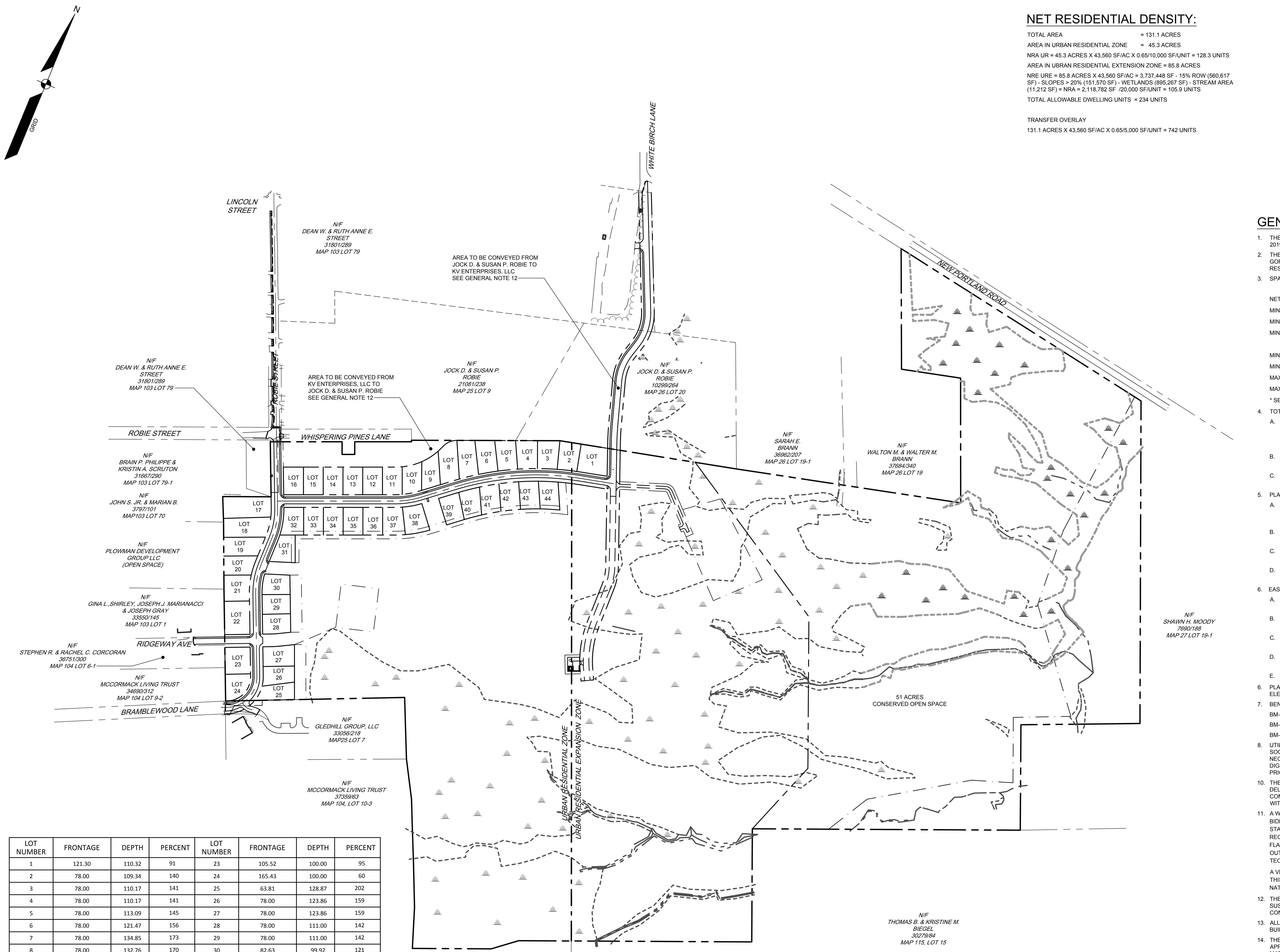
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE

FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

RECORD OWNER:
FREDERICK ROBIE,JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	1" = 200'
PROJECT	21483

21483EC.dwg, TAB:BD (2)



NET RESIDENTIAL DENSITY:

TOTAL AREA = 131.1 ACRES

AREA IN URBAN RESIDENTIAL ZONE = 45.3 ACRES

NRA UR = 45.3 ACRES X 43,560 SF/AC X 0.65/10,000 SF/UNIT = 128.3 UNITS

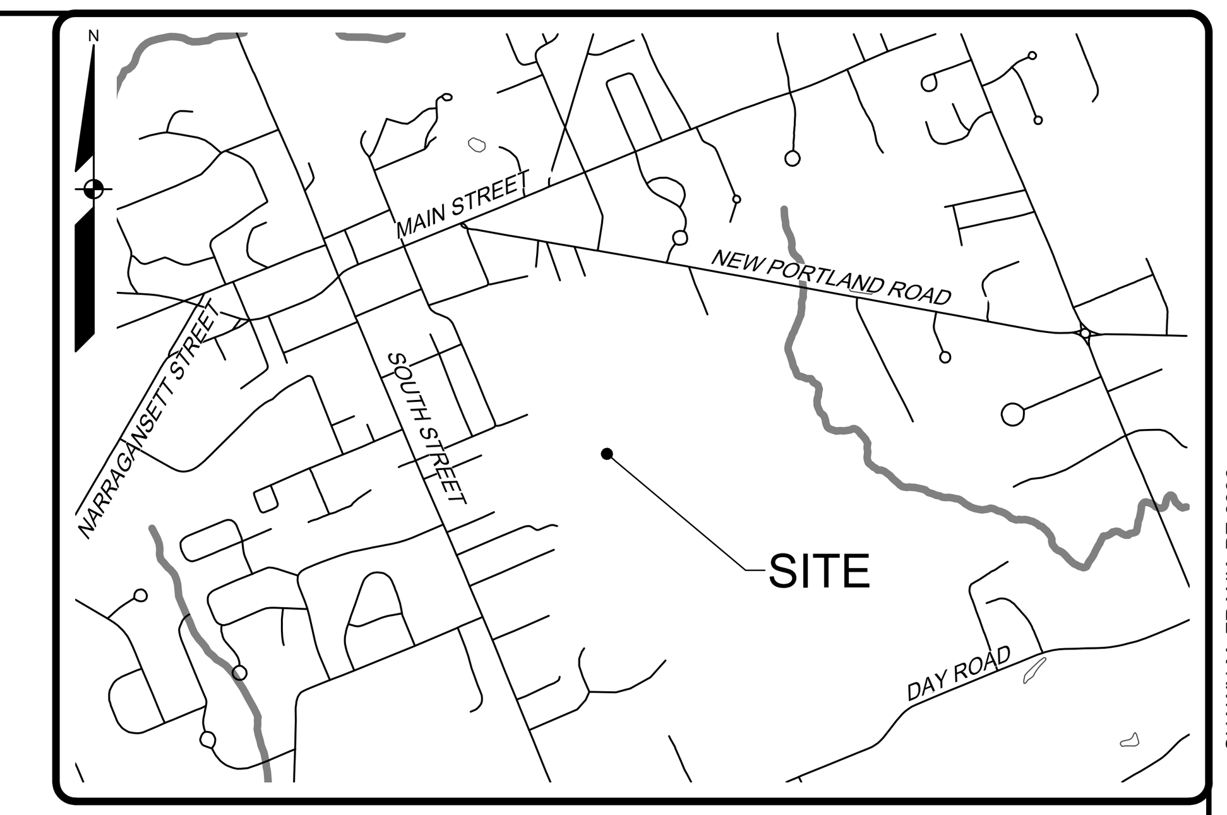
AREA IN UBRAN RESIDENTIAL EXTENSION ZONE = 85.8 ACRES

NRE URE = 85.8 ACRES X 43,560 SF/AC = 3,737,448 SF - 15% ROW (560,617 SF) - SLOPES > 20% (151,570 SF) - WETLANDS (895,267 SF) - STREAM AREA (11,212 SF) = NRA = 2,118,782 SF /20,000 SF/UNIT = 105.9 UNITS

TOTAL ALLOWABLE DWELLING UNITS = 234 UNITS

TRANSFER OVERLAY

131.1 ACRES X 43,560 SF/AC X 0.65/5,000 SF/UNIT = 742 UNITS



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NTS

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    A VERNAL POOL SURVEY WAS PERFORMED DURING APRIL TO MAY BY ANNA K. BIDDLE, SEBAGO TECHNICS, INC. THIS SURVEY CONFORMS TO THE STANDARDS AND METHODS OUTLINED IN CHAPTER 335, SECTION 9, OF THE NATURAL RESOURCE PROTECTION ACT, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION.
12. THE AREAS TO BE CONVEYED FROM KV ENTERPRISES, LLC TO JOCK AND SUSAN ROBIE AND FROM JOCK AND SUSAN ROBIE TO KV ENTERPRISES, LLC SHALL OCCUR SUBSEQUENT TO FINAL SUBDIVISION APPROVAL AND CONCURRENTLY.
13. ALL BUILDINGS WILL MEET ALL APPLICABLE SECTIONS OF NFPA 1 FIRE CODE AND NFPA 101 LIFE SAFETY CODE. BUILDING PLANS SHALL BE SUBMITTED TO THE FIRE DEPARTMENT FOR REVIEW.
14. THE BUILDINGS SHALL BE PROTECTED UNDER THE FIRE SUPPRESSION SYSTEMS ORDINANCE AS APPLICABLE. THE SPRINKLER PLANS SHALL BE SUBMITTED TO THE FIRE DEPARTMENT AND THE STATE FIRE MARSHAL'S OFFICE FOR REVIEW AND PERMITTING. THE PLANS SUBMITTED TO THE FIRE DEPARTMENT SHALL BE SUBMITTED AT LEAST TWO WEEKS PRIOR TO THE START OF THE INSTALLATION OF THE SYSTEM. SPRINKLER TEST PAPERS WILL BE REQUIRED TO BE SUBMITTED TO THE FIRE DEPARTMENT AT THE TIME A CO IS ISSUED.
15. THE BUILDINGS SHALL BE PROPERLY NUMBERED IN ACCORDANCE WITH E911 STANDARDS INCLUDING HEIGHT, COLOR, AND LOCATION. NUMBERS THAT CANNOT BEEN SEEN FROM THE STREET SHALL REQUIRE ADDITIONAL NUMBERS AT THE STREET.
16. ALL GAS METERS (IF ANY) SHALL BE PROPERLY PROTECTED FROM VEHICLE IMPACT.
17. THE FIRE HYDRANT(S) SHALL HAVE A FINAL HEIGHT OF NOT LESS THAN 2 INCHES AND NO GREATER THAN 4 INCHES FROM BREAK AWAY FLANGE TO GRADE AND NO OBSTRUCTION SHALL BE LOCATED WITHIN 10 FEET OF THE PERIMETER. THE INITIAL INSTALLATION OF THE FIRE HYDRANT(S) SHALL BE INSPECTED AND ACCEPTED/ APPROVED BY THE GFD AHJ. AND THE PORTLAND WATER DISTRICT. THE HYDRANT(S) SHALL BE INSPECTED FOR FINAL COMPLIANCE AND FLOW TESTED BY THE PORTLAND WATER DISTRICT PRIOR TO STREET ACCEPTANCE BY THE TOWN OR PRIOR TO ISSUANCE OF THE FINAL CERTIFICATE OF SUBDIVISION COMPLETION. OCCUPANCY WHICHEVER OCCURS FIRST.
18. IT SHALL BE THE OWNERS RESPONSIBILITY TO HAVE A SERVICE WINTER MAINTAINED CONTRACT ON THE NEW HYDRANT AS IT WILL BE PRIVATE HYDRANTS, UNLESS THE TOWN ACCEPTS THE STREETS.

LOT NUMBER	FRONTAGE	DEPTH	PERCENT	LOT NUMBER	FRONTAGE	DEPTH	PERCENT
1	121.30	110.32	91	23	105.52	100.00	95
2	78.00	109.34	140	24	165.43	100.00	60
3	78.00	110.17	141	25	63.81	128.87	202
4	78.00	110.17	141	26	78.00	123.86	159
5	78.00	113.09	145	27	78.00	123.86	159
6	78.00	121.47	156	28	78.00	111.00	142
7	78.00	134.85	173	29	78.00	111.00	142
8	78.00	132.76	170	30	82.63	99.92	121
9	78.00	113.69	146	31	112.41	76.16	68
10	78.00	132.76	170	32	78.00	109.20	140
11	78.01	109.20	140	33	78.00	109.20	140
12	78.00	109.20	140	34	78.00	109.20	140
13	78.00	109.20	140	35	78.00	109.20	140
14	78.00	109.20	140	36	78.00	109.20	140
15	78.00	109.20	140	37	78.00	109.20	140
16	78.00	109.20	140	38	78.00	109.21	140
17	80.00	187.18	234	39	78.00	109.20	140
18	82.29	165.19	201	40	78.00	109.20	140
19	80.00	134.41	168	41	78.00	109.27	140
20	80.00	119.15	149	42	78.00	109.85	141
21	103.14	100.00	97	43	78.00	111.00	142
22	131.60	100.00	76				

PROPERTY LINE TABLE

LINE	BEARING	DISTANCE
L1	S 51°01'23" W	113.07'
L2	N 24°17'14" W	77.23'
L3	N 23°56'32" W	96.60'
L4	N 29°35'51" W	80.01'
L5	N 29°35'51" W	80.01'
L6	N 24°07'51" W	121.72'
L7	N 24°19'12" W	101.15'
L8	N 22°24'52" W	50.00'
L9	S 67°35'08" W	50.00'
L10	N 22°24'52" W	50.00'
L11	N 21°58'16" W	6.05'
L12	N 24°17'14" W	80.10'

GRAPHIC SCALE

200 0 100 200 400

(IN FEET)
1 INCH = 200FT.

PLANT SCHEDULE

	BOTANICAL NAME	COMMON NAME	SIZE	ORIGIN
TREES				
AF	ACER X FREEMANII 'SIENNA'	SIENNA GLEN® MAPLE	2-2.5" Cal.	NATIVE
AG	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVICEBERRY	2-2.5" Cal.	NATIVE
GT	GLEDITSIA TRIACANTHOS INERMIS 'DRAVES'	STREET KEEPER® HONEY LOCUST	2-2.5" Cal.	NON-NATIVE
NS	NYSSA SYLVATICA	TUPELO	2-2.5" Cal.	NATIVE
PG	PICEA GLAUCA	WHITE SPRUCE	5 - 6` Ht.	NATIVE
PO	PICEA OMORIKA	SERBIAN SPRUCE	5 - 6` Ht.	NON-NATIVE
PS	PRUNUS SARGENTII 'PINK FLAIR'	PINK FLAIR® SARGENT CHERRY	2-2.5" Cal.	NON-NATIVE
TA	TILIA AMERICANA 'REDMOND'	REDMOND AMERICAN LINDEN	2-2.5" Cal.	NATIVE
UA	ULMUS AMERICANA 'PRINCETON'	PRINCETON AMERICAN ELM	2-2.5" Cal.	NATIVE

STREET TREES TO BE PLANTED AT A 50' SPACING, PER ORDINANCE SECTION 2-5, F.13
TREE PLANTINGS SHALL MAINTAIN A 10' SEPARATION FROM WATER AND SEWER LINES

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396

STATE OF MAINE
SHAWN M. FRANK No. 6396
LICENSED PROFESSIONAL ENGINEER

12-21-2023

REV:	BY:	DATE:	STATUS:
C	SMF	12-21-2023	SUBMISSION TO DEP FOR STORMWATER LAW
B	SMF	11-13-2023	PRELIMINARY SUBDIVISION COMMENT RESPONSE SUBMISSION
A	SMF	08-21-2023	PRELIMINARY SUBDIVISION PLAN SUBMISSION TO TOWN

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

OVERALL PRELIMINARY SUBDIVISION PLAN
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE

RECORD OWNER:
FREDERICK ROBIE,JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	1" = 200'
PROJECT	21483

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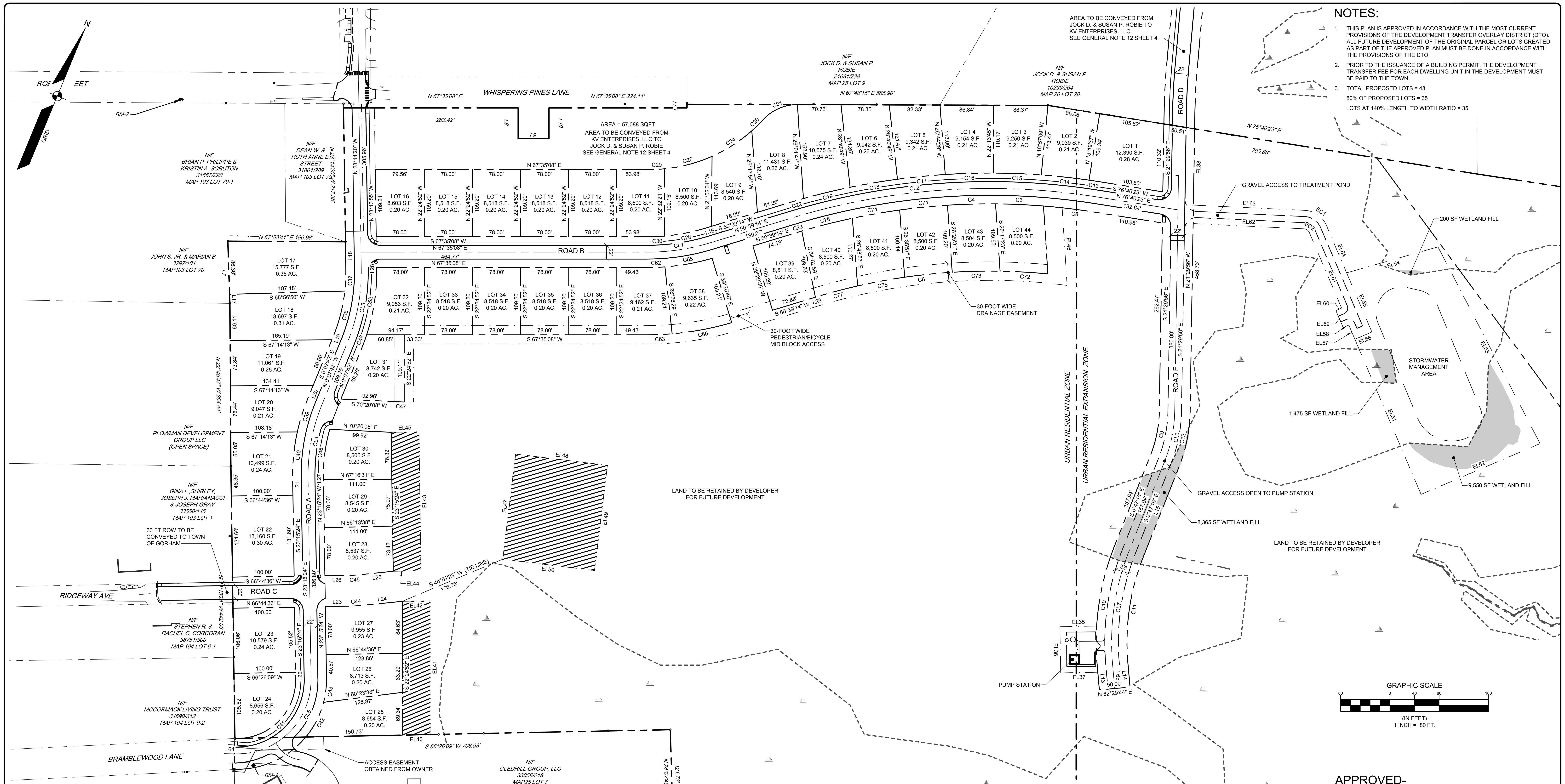

NOTES:

1. THIS PLAN IS APPROVED IN ACCORDANCE WITH THE MOST CURRENT PROVISIONS OF THE DEVELOPMENT TRANSFER OVERLAY DISTRICT (DTO). ALL FUTURE DEVELOPMENT OF THE ORIGINAL PARCEL OR LOTS CREATED AS PART OF THE APPROVED PLAN MUST BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE DTO.
2. PRIOR TO THE ISSUANCE OF A BUILDING PERMIT, THE DEVELOPMENT TRANSFER FEE FOR EACH DWELLING UNIT IN THE DEVELOPMENT MUST BE PAID TO THE TOWN.
3. TOTAL PROPOSED LOTS = 43

   80% OF PROPOSED LOTS = 35

   LOTS AT 140% LENGTH TO WIDTH RATIO = 35

PROPERTY CURVE TABLE

CURVE	LENGTH	RADIUS	CRD. BEARING	CRD. DIST.
C3	78.00'	1078.00'	N 70°08'25" E	77.98'
C4	78.00'	1078.00'	N 65°59'41" E	77.98'
C6	77.68'	968.80'	S 61°39'50" W	77.66'
C8	83.91'	1078.01'	N 74°26'36" E	83.89'
C9	74.10'	205.00'	S 11°08'36" E	73.70'
C10	198.17'	425.00'	S 14°08'46" E	196.38'
C11	174.86'	375.00'	N 14°08'46" W	173.28'
C12	92.18'	255.00'	N 11°08'36" W	91.68'
C13	17.50'	1128.00'	S 76°13'43" W	17.50'
C14	78.00'	1128.00'	S 73°48'11" W	77.98'
C15	78.00'	1128.00'	S 69°50'28" W	77.98'
C16	78.00'	1128.00'	S 65°52'45" W	77.98'
C17	78.00'	1128.00'	S 61°55'02" W	77.98'
C18	78.00'	1128.00'	S 57°57'19" W	77.98'
C19	78.00'	1128.00'	S 53°59'36" W	77.98'
C20	25.98'	250.00'	N 23°03'15" E	25.97'
C21	62.43'	75.00'	N 43°55'23" E	60.64'
C22	26.74'	1128.00'	S 51°19'59" W	26.74'
C23	8.87'	1078.00'	S 50°53'23" W	8.87'
C24	77.04'	250.00'	N 34°51'37" E	76.74'
C26	80.48'	250.00'	N 52°54'40" E	80.13'
C28	68.30'	325.00'	S 56°38'24" W	68.17'
C29	23.79'	250.00'	N 64°51'34" E	23.78'
C30	24.03'	325.00'	S 64°46'41" W	24.02'

PROPERTY CURVE TABLE

CURVE	LENGTH	RADIUS	CRD. BEARING	CRD. DIST.
C37	34.44'	275.00'	S 19°39'04" E	34.42'
C38	76.48'	275.00'	S 8°05'45" E	76.24'
C39	56.06'	325.00'	S 5°04'12" E	55.99'
C40	75.13'	325.00'	S 16°38'03" E	74.96'
C41	152.88'	95.00'	S 23°39'52" W	136.91'
C42	63.81'	145.00'	N 4°41'12" E	63.30'
C43	37.43'	145.00'	N 15°19'00" W	37.33'
C44	22.45'	255.00'	N 64°13'16" E	22.44'
C45	18.05'	205.00'	S 64°13'16" W	18.04'
C46	79.02'	275.00'	N 15°01'28" W	78.75'
C47	9.86'	375.00'	S 69°34'58" W	9.86'
C48	23.21'	325.00'	N 2°10'28" W	23.21'
C52	107.83'	325.00'	N 13°43'31" W	107.34'
C62	28.57'	375.00'	N 65°24'10" E	28.56'
C63	40.37'	484.20'	S 65°11'49" W	40.36'
C65	78.00'	375.00'	N 57°15'41" E	77.86'
C66	98.46'	484.20'	S 56°58'57" W	98.30'
C71	78.00'	1078.00'	N 61°50'56" E	77.98'
C72	77.68'	968.80'	S 70°51'24" W	77.66'
C73	77.76'	968.80'	S 66°15'37" W	77.74'
C74	78.00'	1078.00'	N 57°42'12" E	77.98'
C75	77.68'	968.80'	S 57°04'12" W	77.65'
C76	84.76'	1078.00'	N 53°22'40" E	84.74'
C77	69.65'	968.80'	S 52°42'49" W	69.64'

PROPERTY LINE TABLE

LINE	DIRECTION	DISTANCE
L13	S 27°30'16" E	39.90'
L14	N 27°30'16" W	39.90'
L15	N 0°47'16" W	157.94'
L16	S 50°39'14" W	9.70'
L17	N 24°19'12" W	14.80'
L18	S 23°14'20" E	45.56'
L19	S 0°07'42" E	5.81'
L20	S 0°07'42" E	23.94'
L21	S 23°15'24" E	28.01'
L22	S 23°15'24" E	12.55'
L23	N 66°44'36" E	38.86'
L24	N 61°41'56" E	64.06'
L25	S 61°41'56" W	54.32'
L26	S 66°44'36" W	38.86'
L27	N 23°15'24" W	3.61'
L28	N 23°13'49" W	3.10'
L29	S 50°39'14" W	1.25'

REFER TO GENERAL NOTES ON SHEETS 2 AND 4.

EASEMENT LINE TABLE

LINE	DIRECTION	DISTANCE
EL35	S 66°33'30" W	59.67'
EL36	S 23°26'30" E	75.00'
EL37	N 66°33'30" E	60.18'
EL38	S 21°29'56" E	123.84'
EL40	N 66°26'09" E	45.01'
EL41	N 22°24'56" W	217.02'
EL42	S 66°44'36" W	45.00'
EL43	S 23°15'24" E	225.76'
EL44	S 66°47'58" W	45.00'
EL45	N 66°44'36" E	45.00'
EL46	S 26°03'44" E	126.32'
EL47	N 15°25'18" W	172.00'
EL48	N 74°34'42" E	150.00'
EL49	S 15°25'18" E	172.00'
EL50	S 74°34'42" W	150.00'
EL51	S 45°30'50" E	273.86'

EASEMENT LINE TABLE

LINE	DIRECTION	DISTANCE
EL52	N 44°29'10" E	210.01'
EL53	N 49°50'25" W	359.94'
EL54	S 51°42'51" W	154.08'
EL55	S 45°30'50" E	104.44'
EL56	S 44°29'10" W	30.00'
EL57	N 45°30'50" W	25.00'
EL58	N 44°29'10" E	10.00'
EL59	S 45°30'50" E	30.00'
EL60	S 44°29'10" W	10.00'
EL61	S 45°30'50" E	133.39'
EL62	N 70°17'00" E	180.16'
EL63	N 70°17'00" E	181.09'
EL64	S 45°30'50" E	83.95'

EASEMENT CURVE TABLE

CURVE	LENGTH	RADIUS	CRD. BEARING	CRD. DIST.
EC1	44.82'	40.00'	S 77°36'55" E	42.51'
EC2	11.21'	10.00'	S 77°36'55" E	10.63'

CENTERLINE CURVE TABLE

CURVE	*RADIUS*	*LENGTH*	*CRD. BEARING*	*CRD. DIST.*
CL1	350.00'	103.43'	N 59°07'11" E	103.05'
CL2	1103.00'	500.89'	N 63°39'49" E	496.60'
CL3	300.00'	121.01'	S 11°41'01" E	120.19'
CL4	300.00'	121.10'	S 11°41'33" E	120.28'
CL5	120.00'	192.44'	S 22°41'09" W	172.47'
CL6	230.00'	83.14'	S 11°08'36" E	82.69'
CL7	400.00'	186.52'	S 14°08'46" E	184.83'

CENTERLINE TABLE

LINE	DIRECTION	LENGTH
L64	S 68°37'42" W	19.16'
L65	S 27°30'16" E	39.90'

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

APPROVED-
TOWN OF GORHAM
PLANNING BOARD

_______________ DATE

_______________ CHAIRPERSON

STATE OF MAINE, CUMBERLAND COUNTY SS, REGISTRY OF DEEDS

RECEIVED _______________, 20_____
AT ____H _____M ___________M AND
RECORDED IN
PLAN BOOK __________ PAGE __________

ATTEST: _______________ REGISTER

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SHAWN M. FRANK, PE 6396

12-21-2023

REV:	BY:	DATE:	STATUS:
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SEBAGO TECHNICS
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75 John Roberts Rd.
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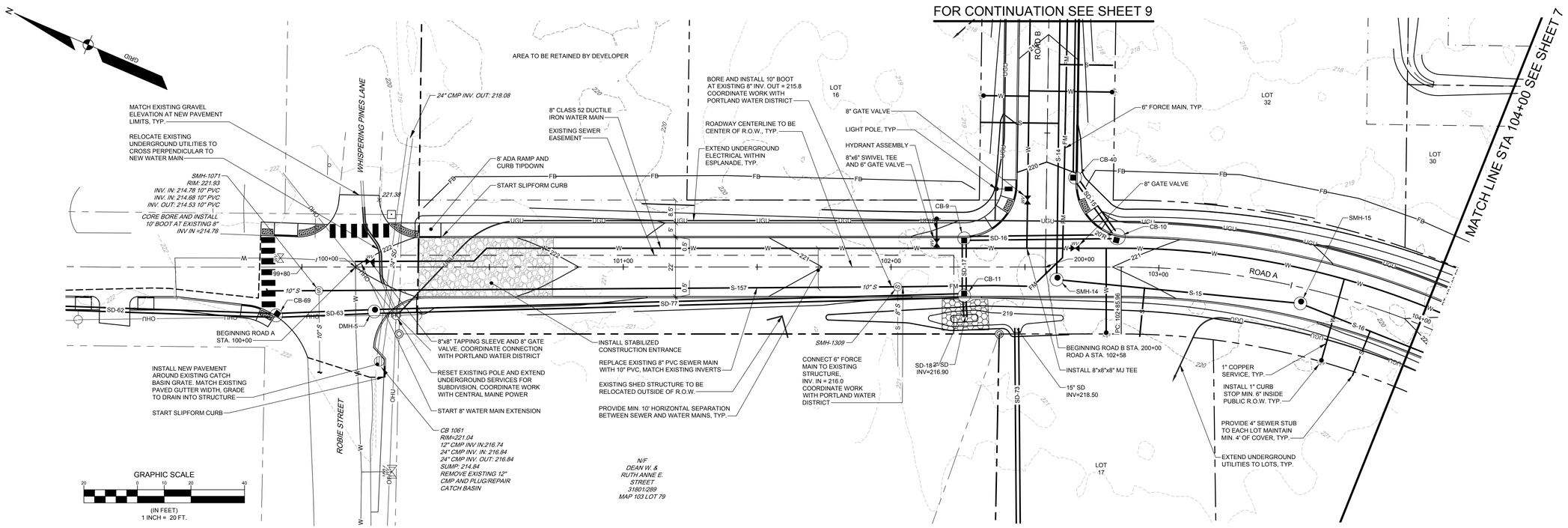
South Portland, ME 04106
Tel. 207-200-2100

PRELIMINARY SUBDIVISION PLAN
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE

FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

RECORD OWNER:
FREDERICK ROBIE,JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	1" = 80'
PROJECT	21483



PLAN VIEW - ROAD A
SCALE: 1" = 20'

SANITARY SEWER STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
SMH-14	220.77	206.90 (S-15)	206.80 (S-14)	48"
SMH-15	221.53	207.40 (S-16)	207.30 (S-15)	48"

SANITARY SEWER PIPE DATA

NAME	SIZE	LENGTH	SLOPE
S-15	8"	87'	0.46%
S-16	8"	185'	0.49%
S-157	10"	212'	0.48%

STORM DRAIN STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-9	220.46	212.50 (SD-17)	212.40 (SD-16)	48"
CB-10	220.79	212.10 (SD-16)	212.00 (SD-15)	60"
CB-11	220.46	213.00 (SD-77) 216.90 (SD-18)	212.70 (SD-17)	48"
CB-69	221.18	217.30 (SD-62)	217.20 (SD-63)	48"
DMH-5	221.70	217.00 (SD-63)	214.75 (SD-77)	48"

STORM DRAIN PIPE DATA

NAME	SIZE	LENGTH	SLOPE
SD-15	15"	23'	0.89%
SD-16	15"	53'	0.57%
SD-17	15"	17'	1.15%
SD-18	12"	6'	8.53%
SD-62	15"	271'	0.55%
SD-63	15"	33'	0.61%
SD-73	15"	176'	0.85%
SD-77	15"	216'	0.81%

PROFILE VIEW
SCALE: HORZ. 1" = 20'
VERT. 1" = 4'

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396

STATE OF MAINE
SHAWN M. FRANK
No. 6396
PROFESSIONAL ENGINEER
12-21-2023

REV.	BY:	DATE:	STATUS
C	SMF	12.21.2023	SUBMISSION TO DEP FOR STORMWATER LAW
B	SMF	11.13.2023	PRELIMINARY SUBDIVISION COMMENT RESPONSE SUBMISSION
A	SMF	08-21-2023	PRELIMINARY SUBDIVISION PLAN SUBMISSION TO TOWN

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND UNTO ALL LIABILITY TO SEBAGO TECHNICS, INC.

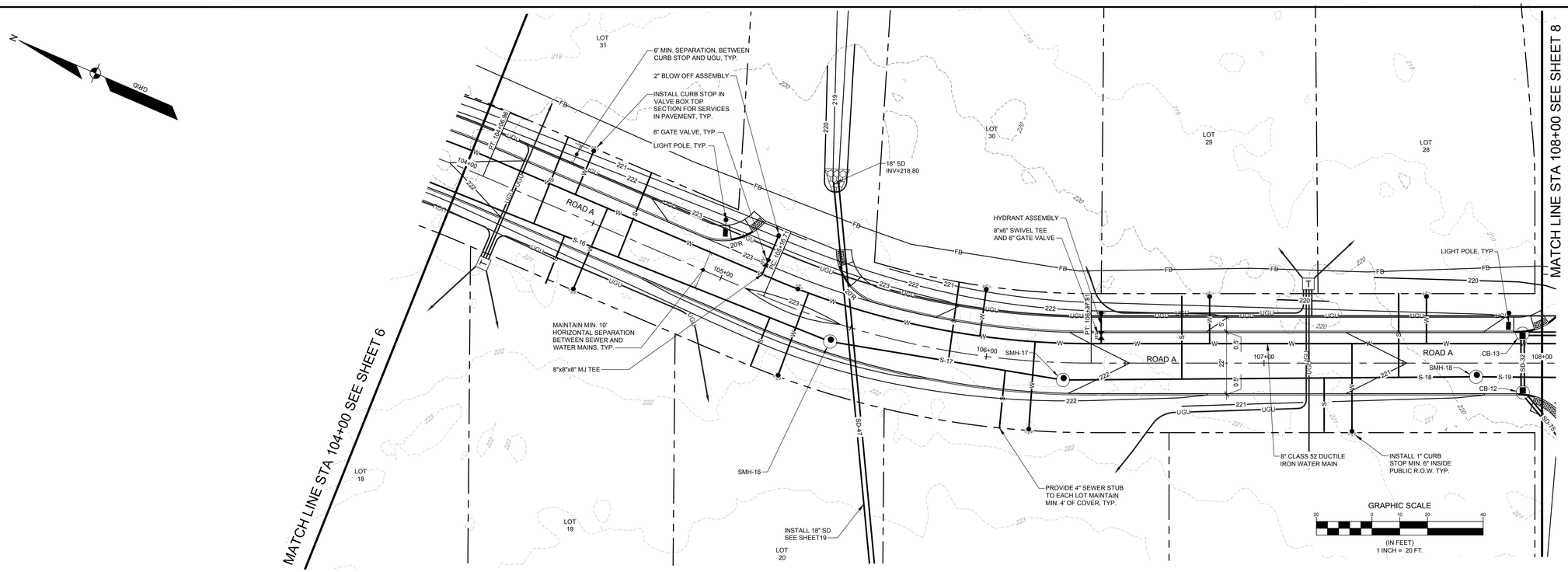
SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

PLAN & PROFILE ROAD A - STA 99+80 - 104+00
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE
FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

RECORD OWNER:
FREDERICK ROBIE,JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	1" = 20'
PROJECT	21483

SHEET 6 OF29



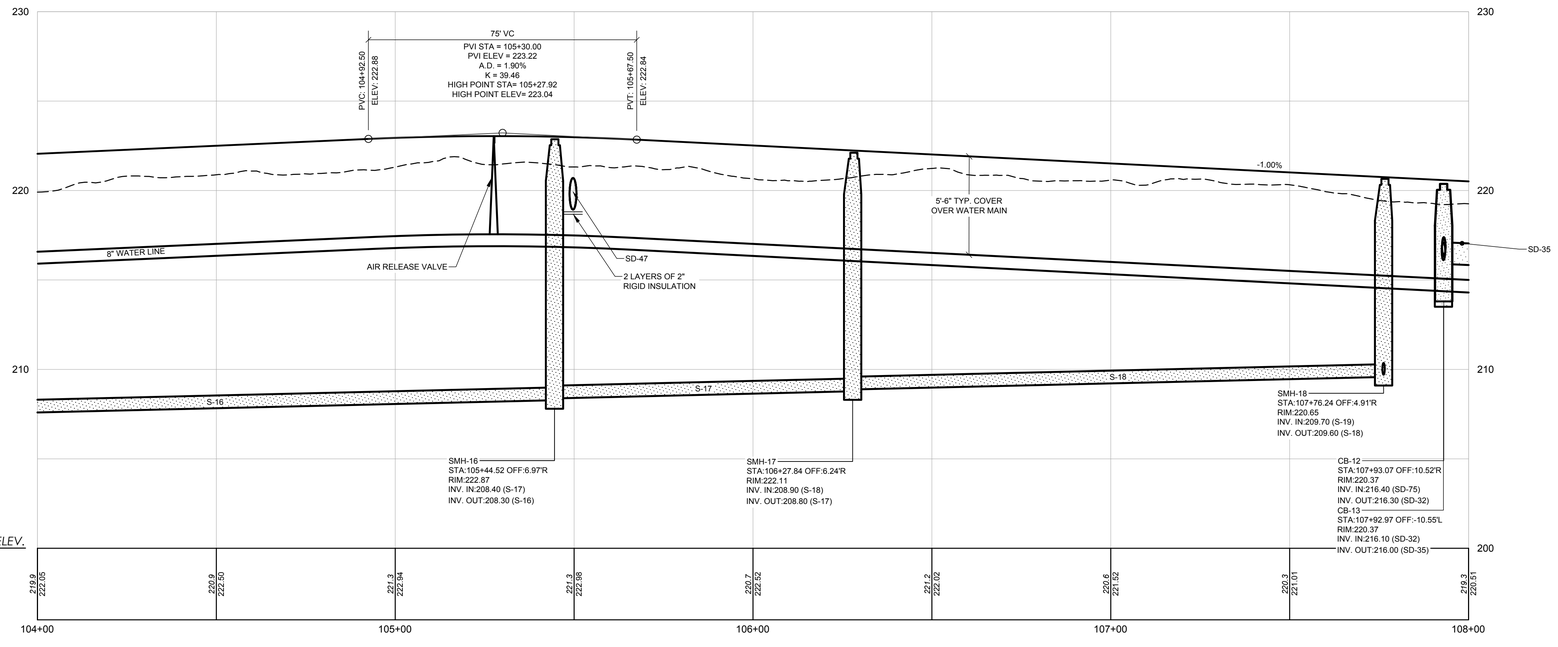
PLAN VIEW - ROAD A
SCALE: 1" = 20'

SANITARY SEWER STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
SMH-16	222.87	208.40 (S-17)	208.30 (S-16)	48"
SMH-17	222.11	208.90 (S-18)	208.80 (S-17)	48"
SMH-18	220.65	209.70 (S-19)	209.60 (S-18)	48"

SANITARY SEWER PIPE DATA			
NAME	SIZE	LENGTH	SLOPE
S-16	8"	185'	0.49%
S-17	8"	81'	0.49%
S-18	8"	145'	0.48%
S-19	8"	225'	0.49%

STORM DRAIN STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-12	220.37	216.40 (SD-75)	216.30 (SD-32)	48"
CB-13	220.37	216.10 (SD-32)	216.00 (SD-35)	48"

STORM DRAIN PIPE DATA			
NAME	SIZE	LENGTH	SLOPE
SD-32	12"	17'	1.17%
SD-34	12"	106'	0.47%
SD-47	18"	177'	0.51%



PROFILE VIEW
SCALE: HORZ. 1" = 20'
VERT. 1" = 4'

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396

STATE OF MAINE * SHAWN M. FRANK No. 6396 * PROFESSIONAL ENGINEER
12-21-2023

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PLAN & PROFILE ROAD A - STA 104+00 - 108+00
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE
FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
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RECORD OWNER:
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DESIGNED	JBP
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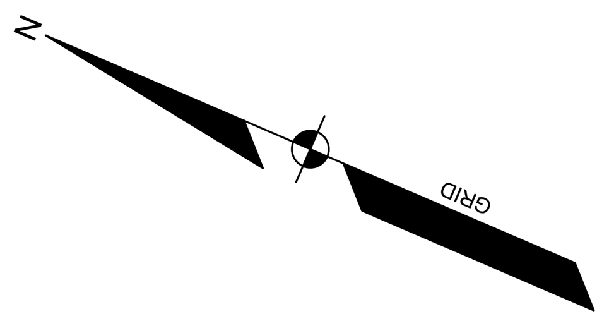
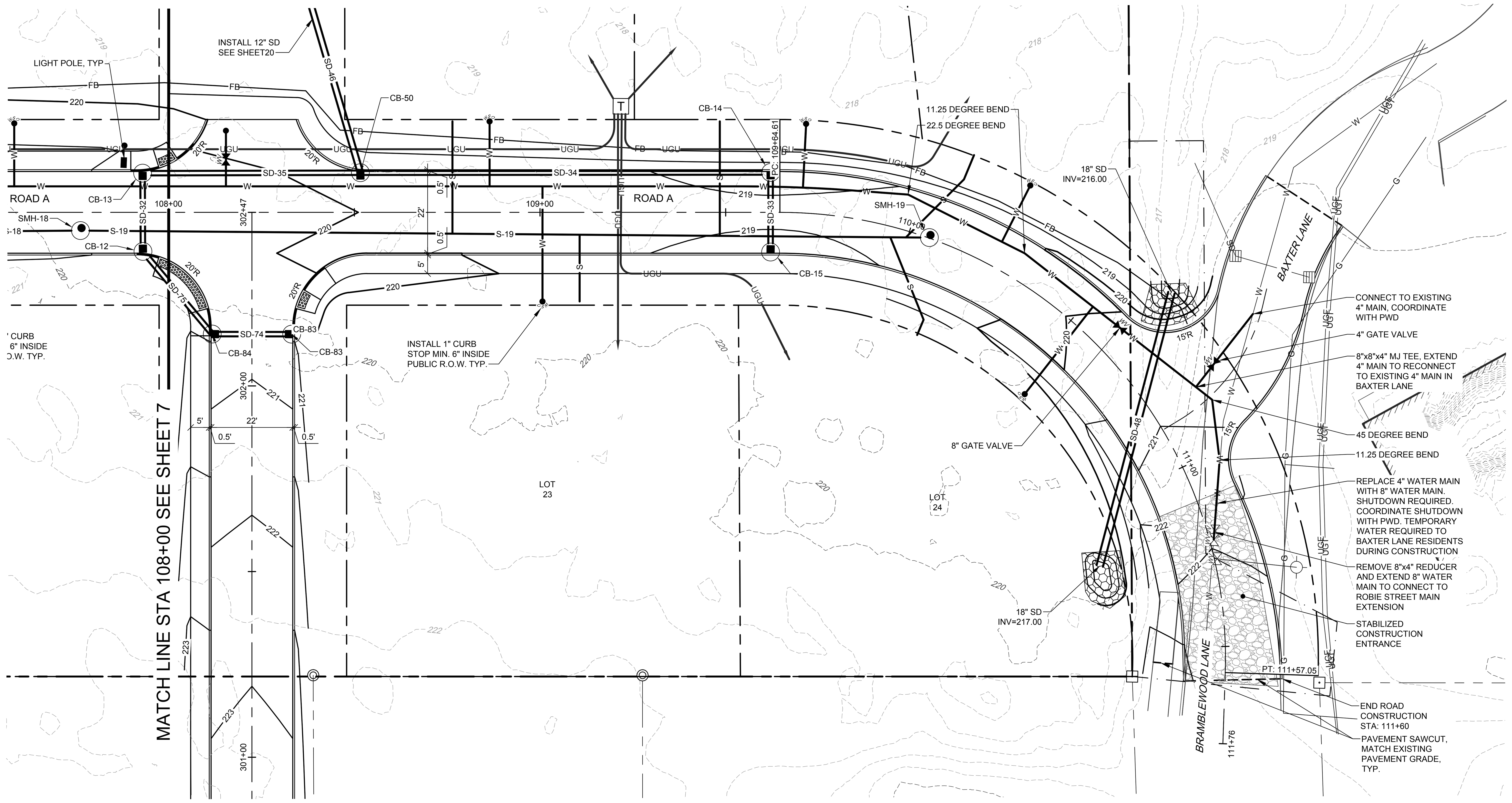
CHECKED	SMF
DATE	05/31/2022
SCALE	1" = 20'
PROJECT	21483

SHEET 7 OF29





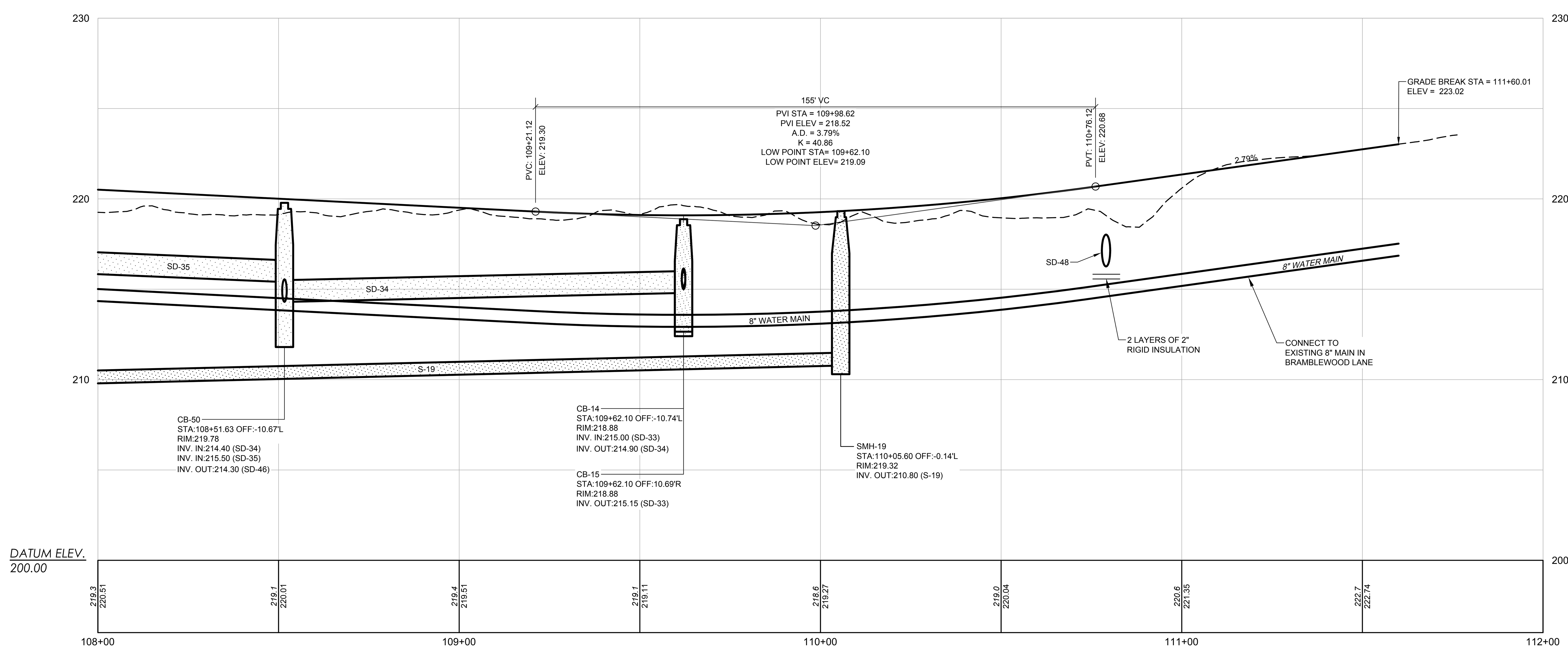
PLAN VIEW - ROAD A
SCALE: 1" = 20'

SANITARY SEWER STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.

SANITARY SEWER PIPE DATA			
NAME	SIZE	LENGTH	SLOPE

STORM DRAIN STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-14	218.88	215.00 (SD-33)	214.90 (SD-34)	48"
CB-15	218.88		215.15 (SD-33)	48"
CB-50	219.78	214.40 (SD-34) 215.50 (SD-35)	214.30 (SD-46)	48"

STORM DRAIN PIPE DATA			
NAME	SIZE	LENGTH	SLOPE
SD-33	12"	17'	0.86%
SD-34	12"	106'	0.47%
SD-46	15"	301'	0.60%
SD-48	18"	76'	1.31%



PROFILE VIEW
SCALE: HORZ. 1" = 20'
VERT. 1" = 4'

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396

STATE OF MAINE
SHAWN M. FRANK
No. 6396
LICENSED
PROFESSIONAL ENGINEER
12-21-2023

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PLAN & PROFILE ROAD A - STA 108+00 - 112+00
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE

RECORD OWNER:
FREDERICK ROBIE,JR.
C/O BRUCE ROBIE
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FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
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DESIGNED	JBP
DRAWN	STI
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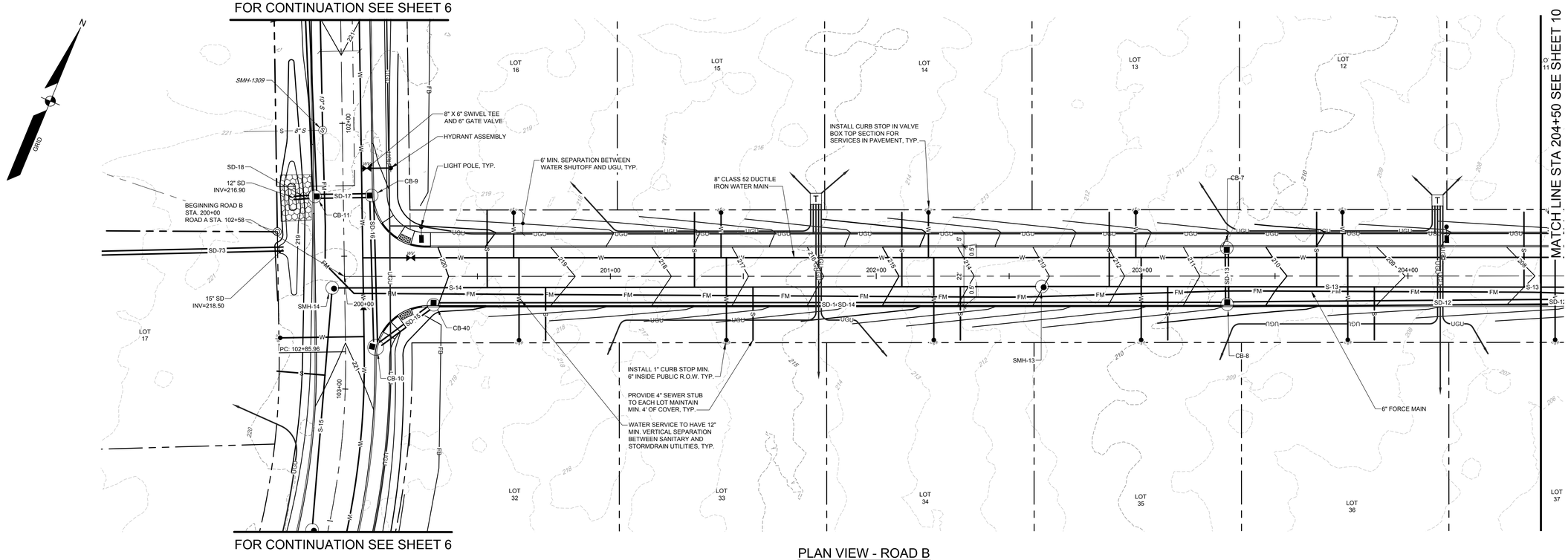


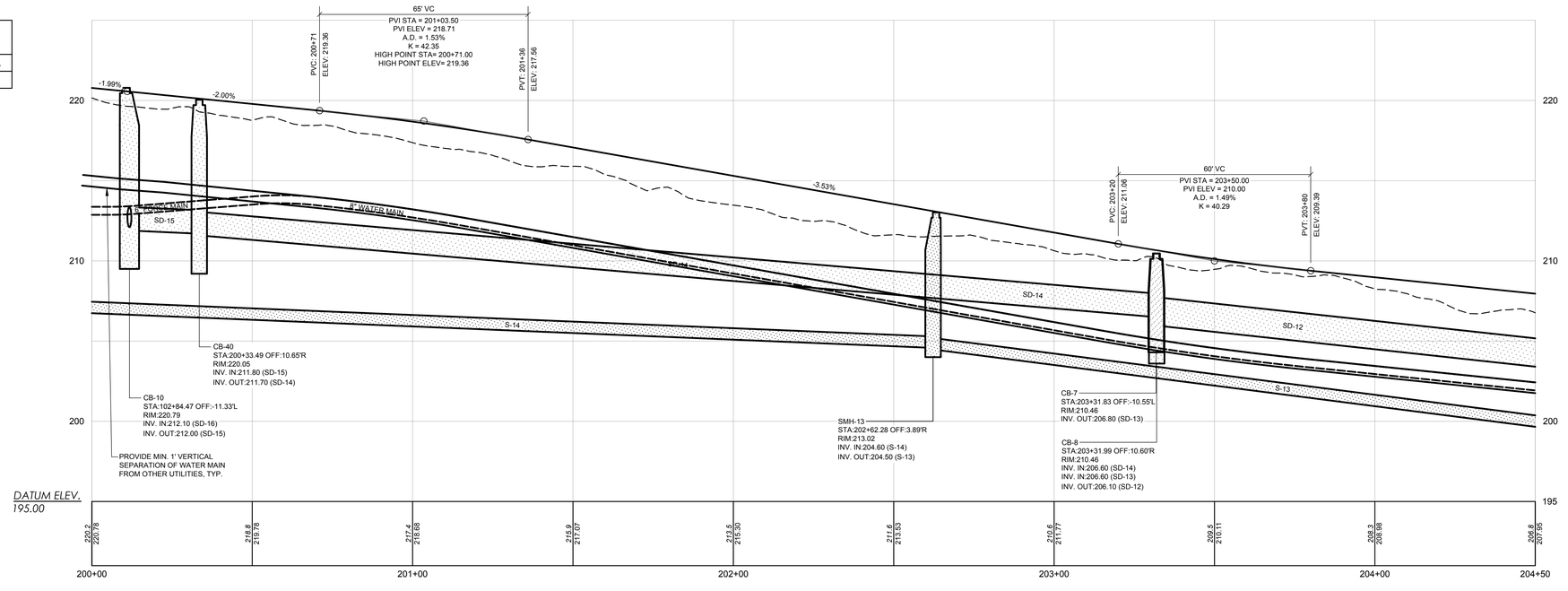
PLAN VIEW - ROAD B
SCALE: 1" = 20'

SANITARY SEWER STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
SMH-13	213.02	204.60 (S-14)	204.50 (S-13)	48"

SANITARY SEWER PIPE DATA			
NAME	SIZE	LENGTH	SLOPE
S-13	8"	214'	2.61%
S-14	8"	263'	0.84%

STORM DRAIN STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-7	210.46		206.80 (SD-13)	48"
CB-8	210.46	206.60 (SD-14) 206.60 (SD-13)	206.10 (SD-12)	48"
CB-10	220.79	212.10 (SD-16)	212.00 (SD-15)	60"
CB-11	220.46	213.00 (SD-77) 216.90 (SD-18)	212.70 (SD-17)	48"
CB-40	220.05	211.80 (SD-15)	211.70 (SD-14)	48"

STORM DRAIN PIPE DATA			
NAME	SIZE	LENGTH	SLOPE
SD-12	18"	158'	2.21%
SD-13	12"	17'	1.17%
SD-14	15"	295'	1.73%
SD-15	15"	23'	0.89%
SD-16	15"	53'	0.57%
SD-17	15"	17'	1.15%



PROFILE VIEW
SCALE: HORZ. 1" = 20'
VERT. 1" = 4'

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396

STATE OF MAINE
SHAWN M. FRANK
No. 6396
PROFESSIONAL ENGINEER
12-21-2023

REV.	BY:	DATE:	STATUS
C.	SMF	12-21-2023	SUBMISSION TO DEP FOR STORMWATER LAW
B.	SMF	11-13-2023	PRELIMINARY SUBDIVISION COMMENT RESPONSE SUBMISSION
A.	SMF	08-21-2023	PRELIMINARY SUBDIVISION PLAN SUBMISSION TO TOWN

SEBAGO TECHNICS
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75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

PLAN & PROFILE ROAD B - STA 200+00 - 204+50

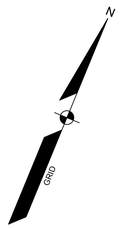
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE

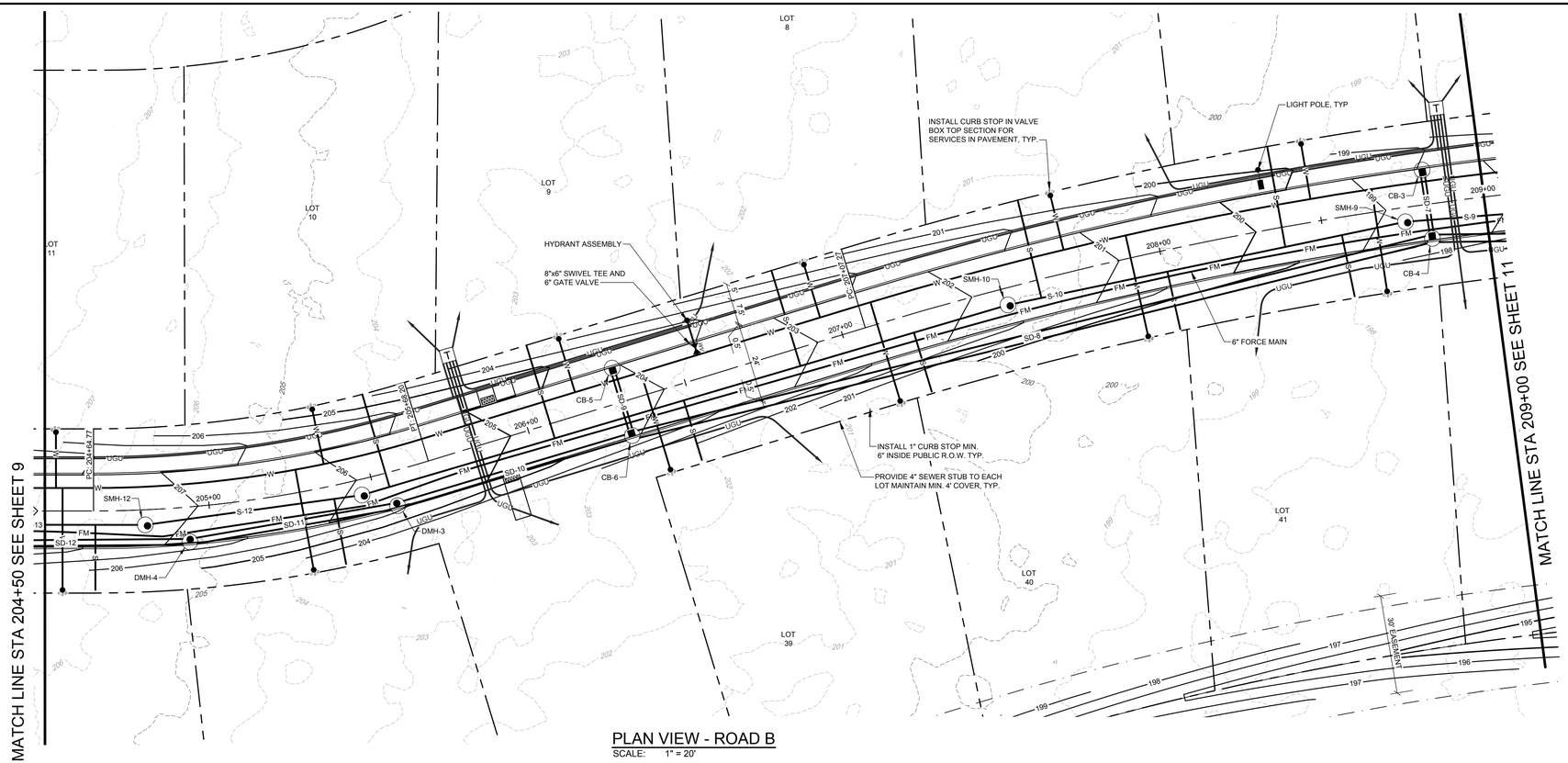
FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1050
PORTLAND, MAINE

RECORD OWNER:
FREDERICK ROBIE,JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	1" = 20'
PROJECT	21483

SHEET 9 OF29





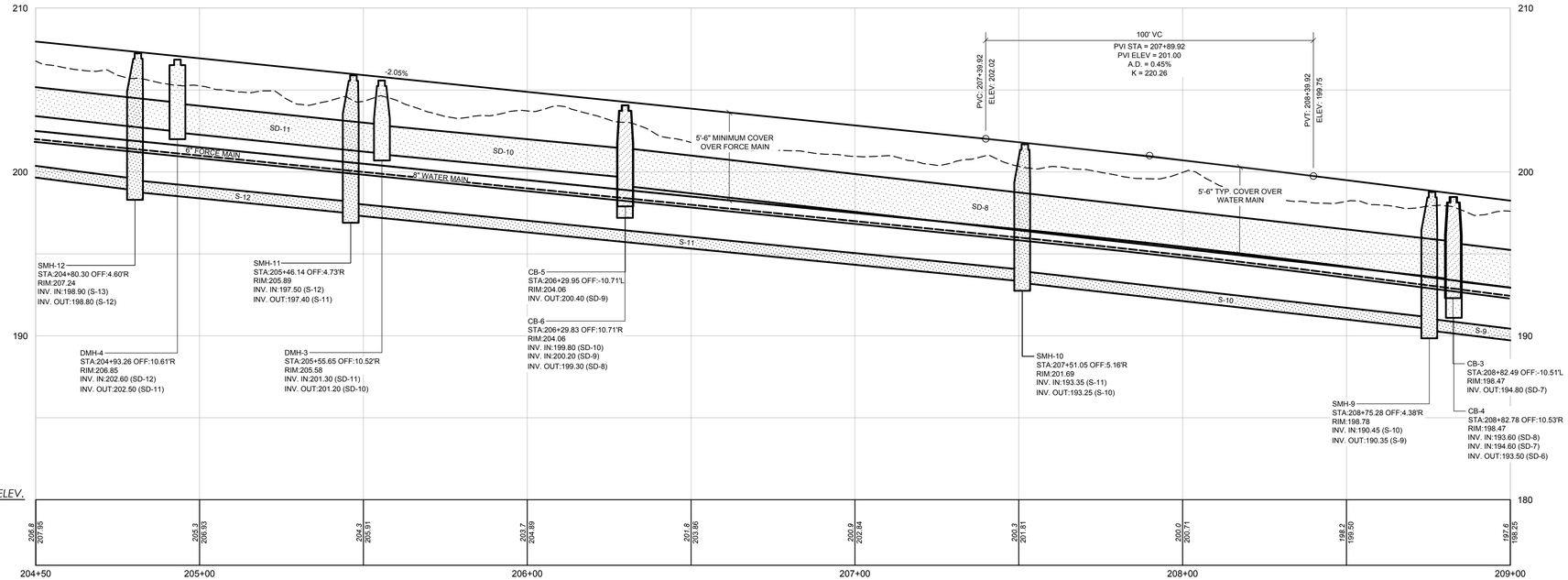
PLAN VIEW - ROAD B
SCALE: 1" = 20'

SANITARY SEWER STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
SMH-9	198.78	190.45 (S-10)	190.35 (S-9)	48"
SMH-10	201.69	193.35 (S-11)	193.25 (S-10)	48"
SMH-12	207.24	198.90 (S-13)	198.80 (S-12)	48"

SANITARY SEWER PIPE DATA			
NAME	SIZE	LENGTH	SLOPE
S-9	8"	141'	2.52%
S-10	8"	120'	2.34%
S-12	8"	63'	2.08%
S-13	8"	214'	2.61%

STORM DRAIN STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-3	198.47		194.80 (SD-7)	48"
CB-4	198.47	193.60 (SD-8) 194.60 (SD-7)	193.50 (SD-6)	48"
CB-5	204.06		200.40 (SD-9)	48"
CB-6	204.06	199.80 (SD-10) 200.20 (SD-9)	199.30 (SD-8)	48"
DMH-4	206.85	202.60 (SD-12)	202.50 (SD-11)	48"

STORM DRAIN PIPE DATA			
NAME	SIZE	LENGTH	SLOPE
SD-7	12"	17'	1.17%
SD-8	24"	247'	2.31%
SD-9	12"	17'	1.15%
SD-11	18"	60'	1.99%
SD-12	18"	158'	2.21%



PROFILE VIEW
SCALE: HORZ. 1" = 20'
VERT. 1" = 4'

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396

STATE OF MAINE
SHAWN M. FRANK
No. 6396
PROFESSIONAL ENGINEER
12-21-2023

REV.	BY:	DATE:	STATUS
C.	SMF	12.21.2023	SUBMISSION TO DEP FOR STORMWATER LAW
B.	SMF	11.13.2023	PRELIMINARY SUBDIVISION COMMENT RESPONSE SUBMISSION
A.	SMF	08.21.2023	PRELIMINARY SUBDIVISION PLAN SUBMISSION TO TOWN

SEBAGO TECHNICS
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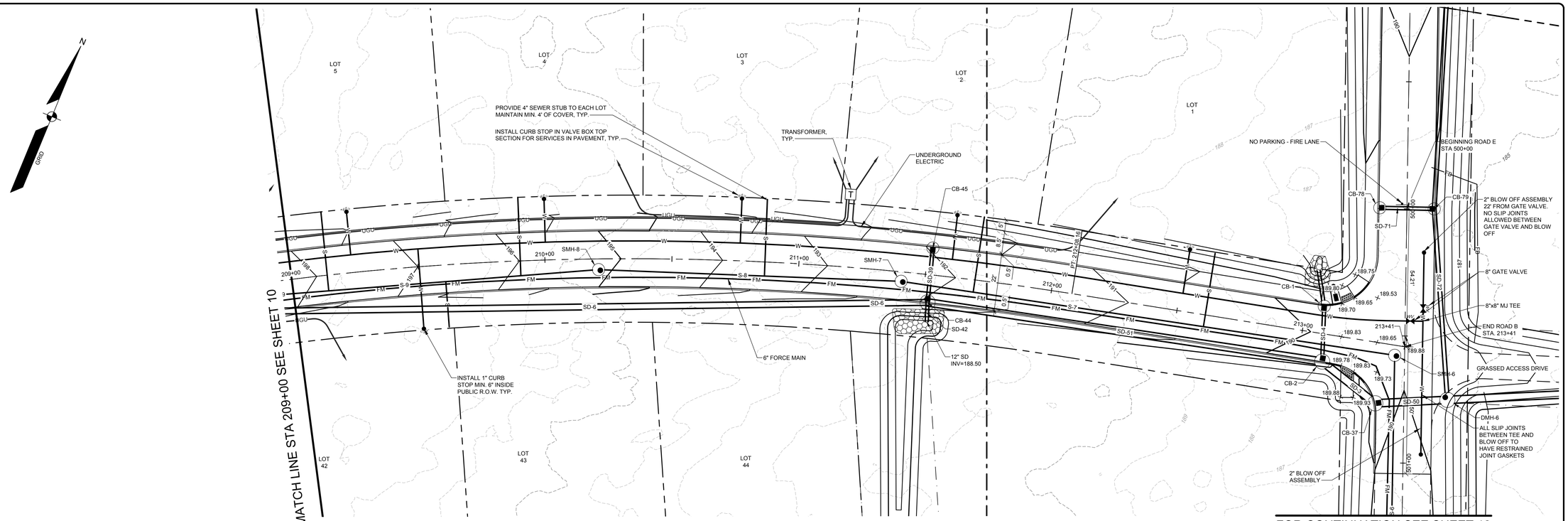
PLAN & PROFILE ROAD B - STA 204+50 - 209+00
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE
FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

RECORD OWNER:
FREDERICK ROBIE, JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	1" = 20'
PROJECT	21483

SHEET10 OF29



PLAN VIEW - ROAD B
SCALE: 1" = 20'

SANITARY SEWER STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
SMH-6	189.83	181.50 (S-7)	181.40 (S-6)	48"
SMH-7	192.31	184.00 (S-8)	183.90 (S-7)	48"
SMH-8	195.14	186.80 (S-9)	186.70 (S-8)	48"

SANITARY SEWER PIPE DATA

NAME	SIZE	LENGTH	SLOPE
S-7	8"	192'	1.25%
S-8	8"	115'	2.34%
S-9	8"	141'	2.52%

STORM DRAIN STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-1	189.73	185.55 (SD-79)	185.45 (SD-4)	48"
CB-2	189.70	184.35 (SD-51) 185.30 (SD-4)	184.25 (SD-3)	60"
CB-37	189.79	184.10 (SD-3)	184.00 (SD-50)	60"
CB-44	191.95	187.10 (SD-6) 188.10 (SD-39) 188.30 (SD-42)	186.60 (SD-51)	60"
CB-45	191.96		188.30 (SD-39)	48"

STORM DRAIN PIPE DATA

NAME	SIZE	LENGTH	SLOPE
SD-3	30"	22'	0.70%
SD-4	12"	17'	0.87%
SD-6	24"	261'	2.45%
SD-39	12"	17'	1.18%
SD-42	12"	5'	3.91%
SD-50	30"	23'	2.63%
SD-51	30"	152'	1.48%

PROFILE VIEW
SCALE: HORZ. 1" = 20'
VERT. 1" = 8'

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396

STATE OF MAINE
SHAWN M. FRANK
No. 6396
PROFESSIONAL ENGINEER
12-21-2023

REV.	BY:	DATE:	STATUS
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PLAN & PROFILE ROAD B - STA 209+00 - 213+41

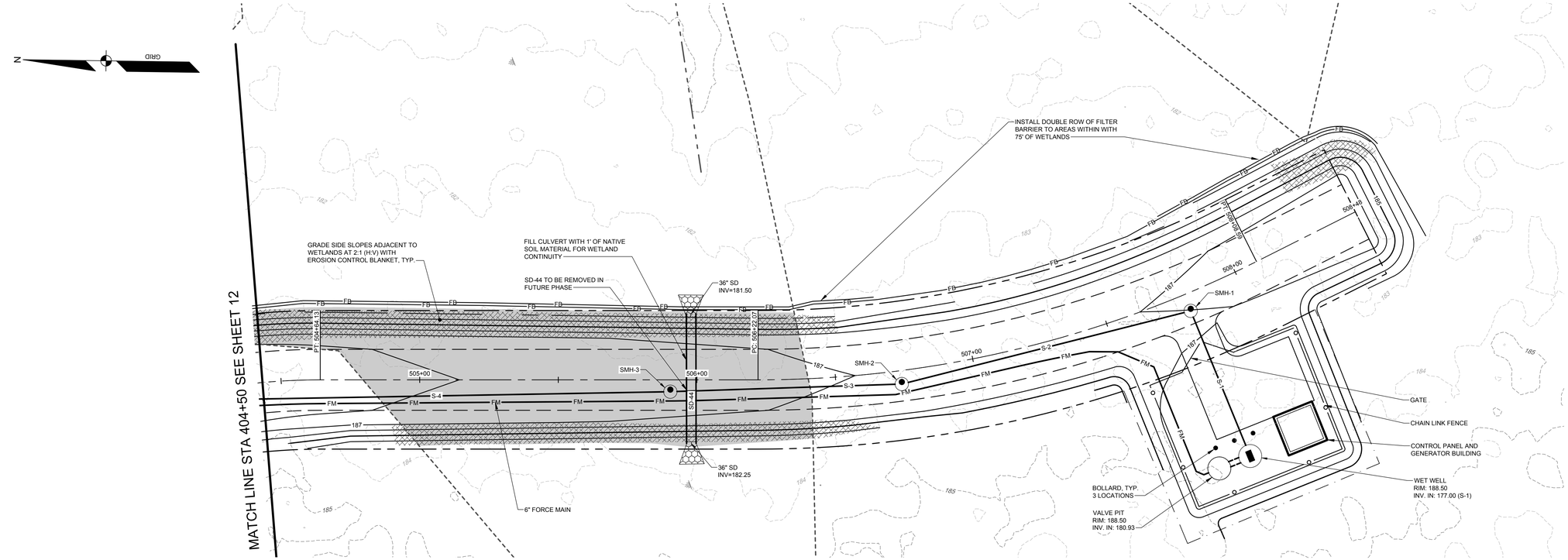
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE

FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

RECORD OWNER:
FREDERICK ROBIE, JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	1" = 20'
PROJECT	21483

SHEET11 OF29

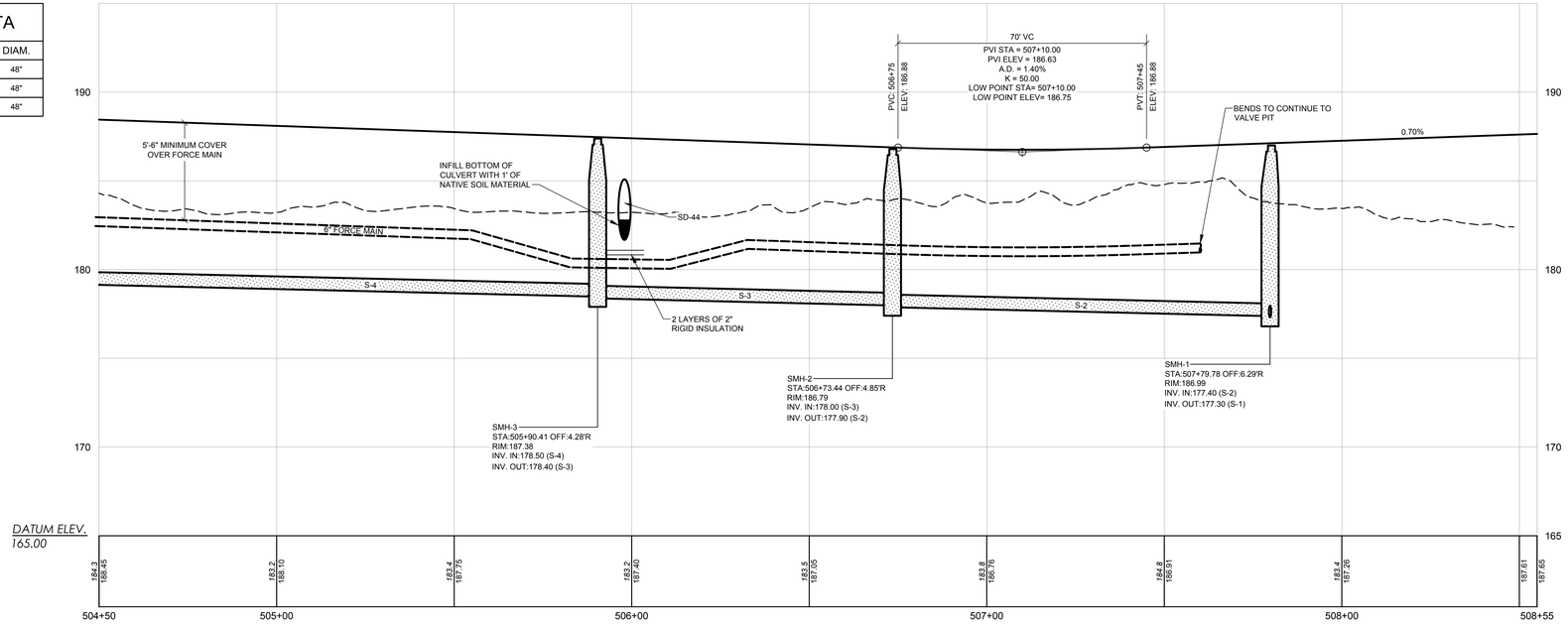


PLAN VIEW ROAD E
SCALE: 1" = 20'

SANITARY SEWER STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
SMH-1	186.99	177.40 (S-2)	177.30 (S-1)	48"
SMH-2	186.79	178.00 (S-3)	177.90 (S-2)	48"
SMH-3	187.38	178.50 (S-4)	178.40 (S-3)	48"

SANITARY SEWER PIPE DATA			
NAME	SIZE	LENGTH	SLOPE
S-1	8"	52'	0.58%
S-2	8"	104'	0.48%
S-3	8"	80'	0.50%
S-4	8"	165'	0.49%

STORM DRAIN PIPE DATA			
NAME	SIZE	LENGTH	SLOPE
SD-44	36"	47"	1.60%



PROFILE VIEW
SCALE: HORZ. 1" = 20'
VERT. 1" = 4'

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396

STATE OF MAINE * SHAWN M. FRANK * No. 6396 * PROFESSIONAL ENGINEER
12-21-2023

REV.	BY:	DATE:	STATUS
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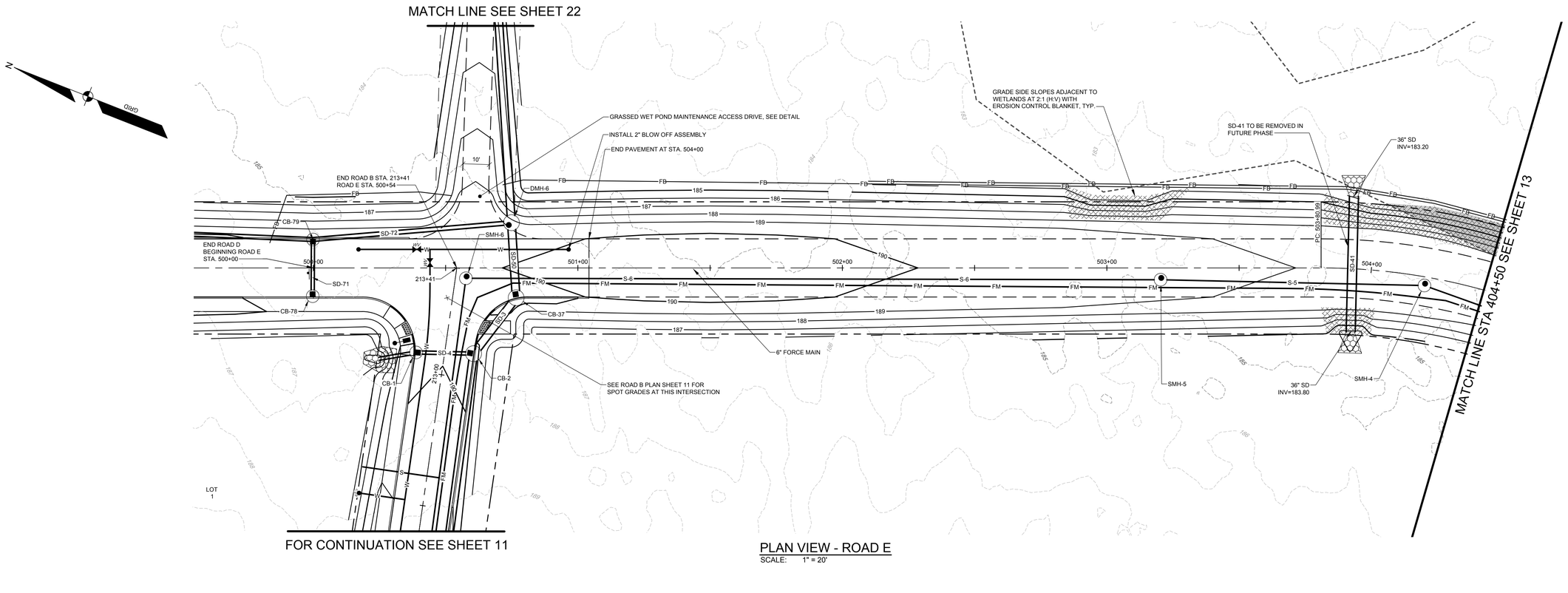
PLAN & PROFILE OF STA 504+50 - 508+55
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE
FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

RECORD OWNER:
FREDERICK ROBIE,JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	1" = 20'
PROJECT	21483

SHEET13 OF29



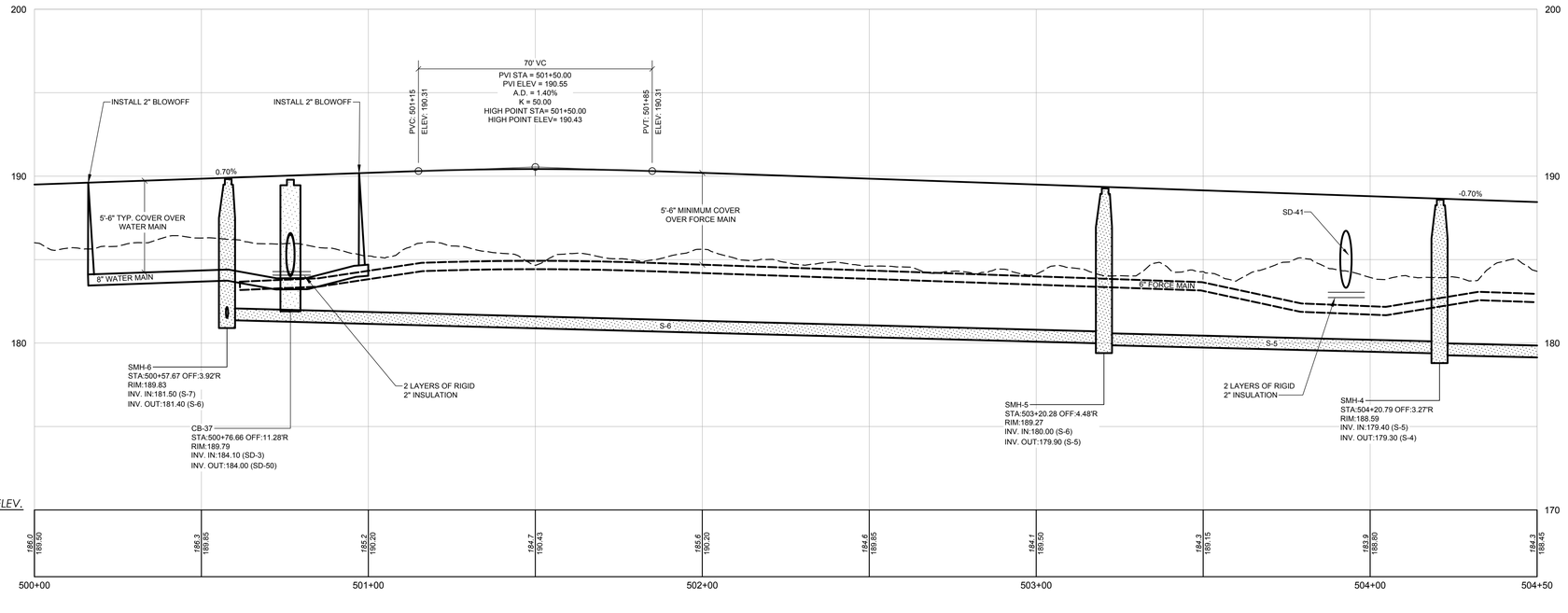
PLAN VIEW - ROAD E
SCALE: 1" = 20'

SANITARY SEWER STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
SMH-4	188.59	179.40 (S-5)	179.30 (S-4)	48"
SMH-5	189.27	180.00 (S-6)	179.90 (S-5)	48"
SMH-6	189.83	181.50 (S-7)	181.40 (S-6)	48"
SMH-7	192.31	184.00 (S-8)	183.90 (S-7)	48"

SANITARY SEWER PIPE DATA			
NAME	SIZE	LENGTH	SLOPE
S-4	8"	165'	0.49%
S-5	8"	96'	0.52%
S-6	8"	259'	0.54%
S-7	8"	192'	1.25%
S-8	8"	115'	2.34%

STORM DRAIN STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-1	189.73	185.55 (SD-79)	185.45 (SD-4)	48"
CB-2	189.70	184.35 (SD-51) 185.30 (SD-4)	184.25 (SD-3)	60"
CB-37	189.79	184.10 (SD-3)	184.00 (SD-50)	60"

STORM DRAIN PIPE DATA			
NAME	SIZE	LENGTH	SLOPE
SD-3	30"	22'	0.70%
SD-4	12"	17'	0.87%
SD-41	36"	51'	1.17%
SD-50	30"	23'	2.63%
SD-51	30"	152'	1.48%



PROFILE VIEW
SCALE: HORZ. 1" = 20'
VERT. 1" = 4'

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396

STATE OF MAINE
SHAWN M. FRANK
No. 6396
PROFESSIONAL ENGINEER
12-21-2023

REV.	BY:	DATE:	STATUS
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Tel. 207-200-2100

PLAN & PROFILE OF STA 500+00 - 504+50

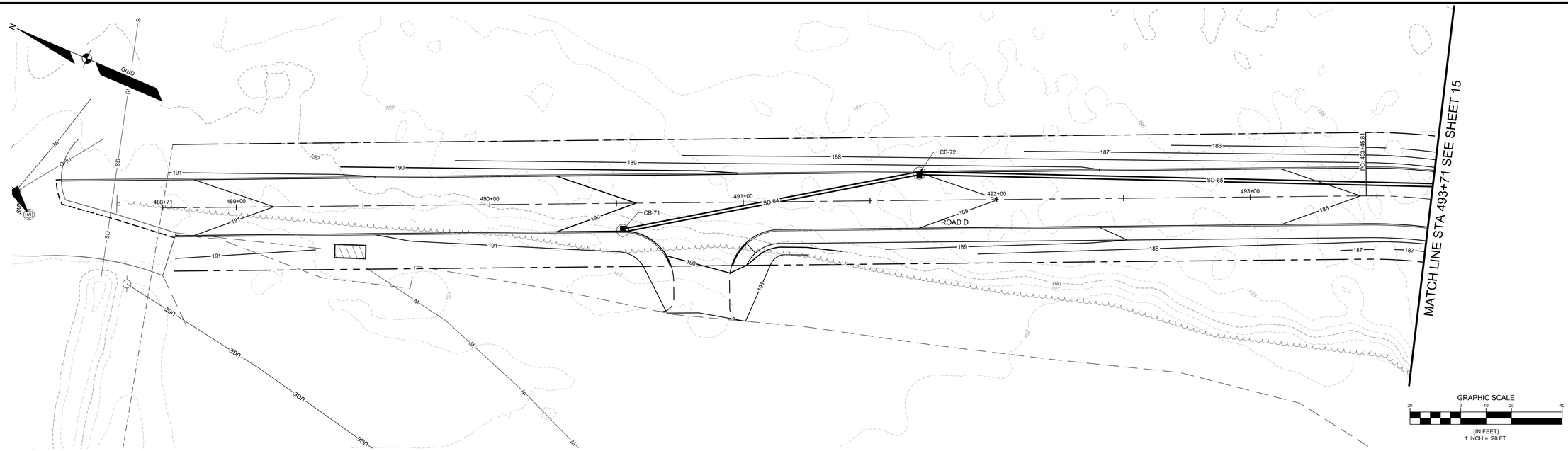
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE

FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

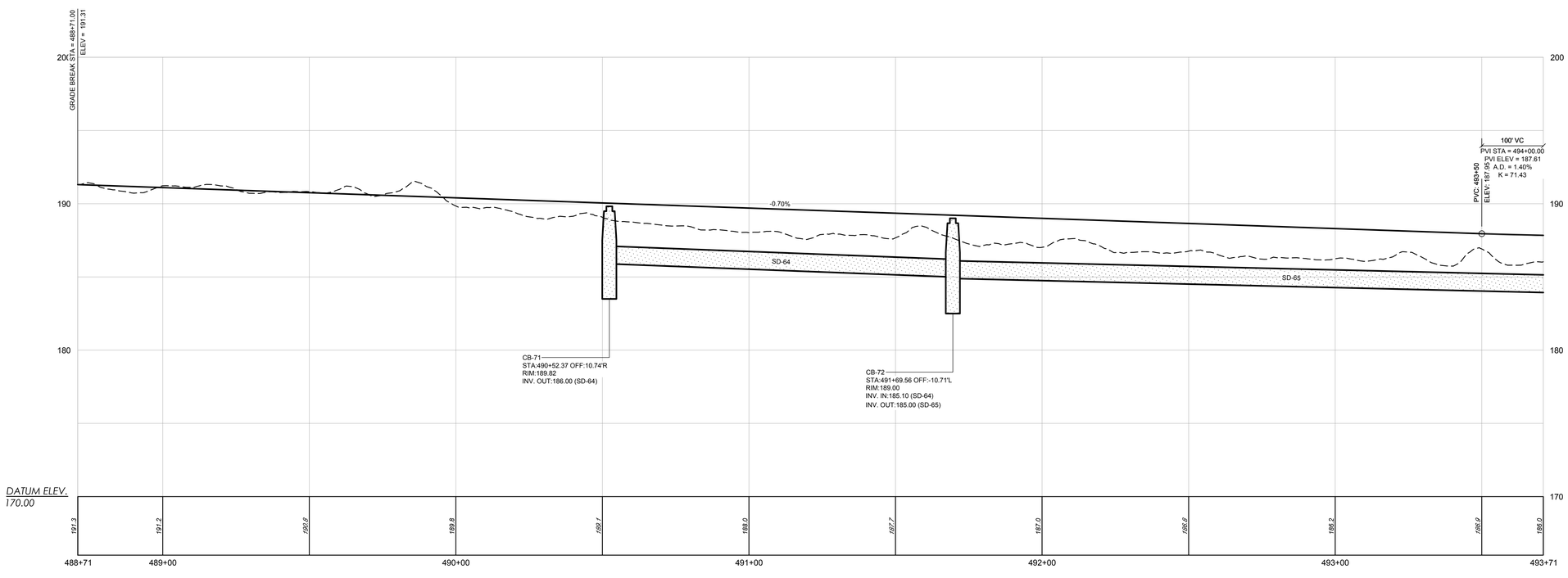
RECORD OWNER:
FREDERICK ROBIE,JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	1" = 20'
PROJECT	21483

SHEET12 OF29



PLAN VIEW - ROAD D
SCALE: 1" = 20'



PROFILE VIEW - ROAD D
SCALE: HORZ. 1" = 20'
VERT. 1" = 4'

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396

STATE OF MAINE
SHAWN M. FRANK
No. 6396
PROFESSIONAL ENGINEER
12-21-2023

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PLAN & PROFILE ROAD D STA 488+71 - 493+71

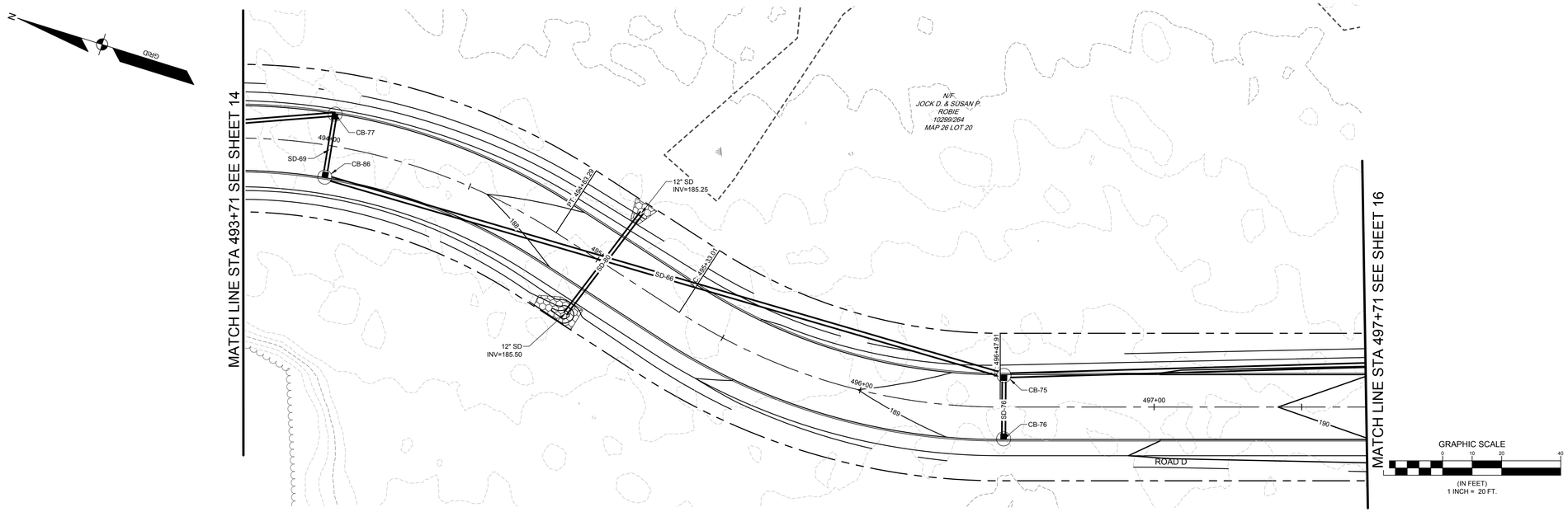
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE

FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

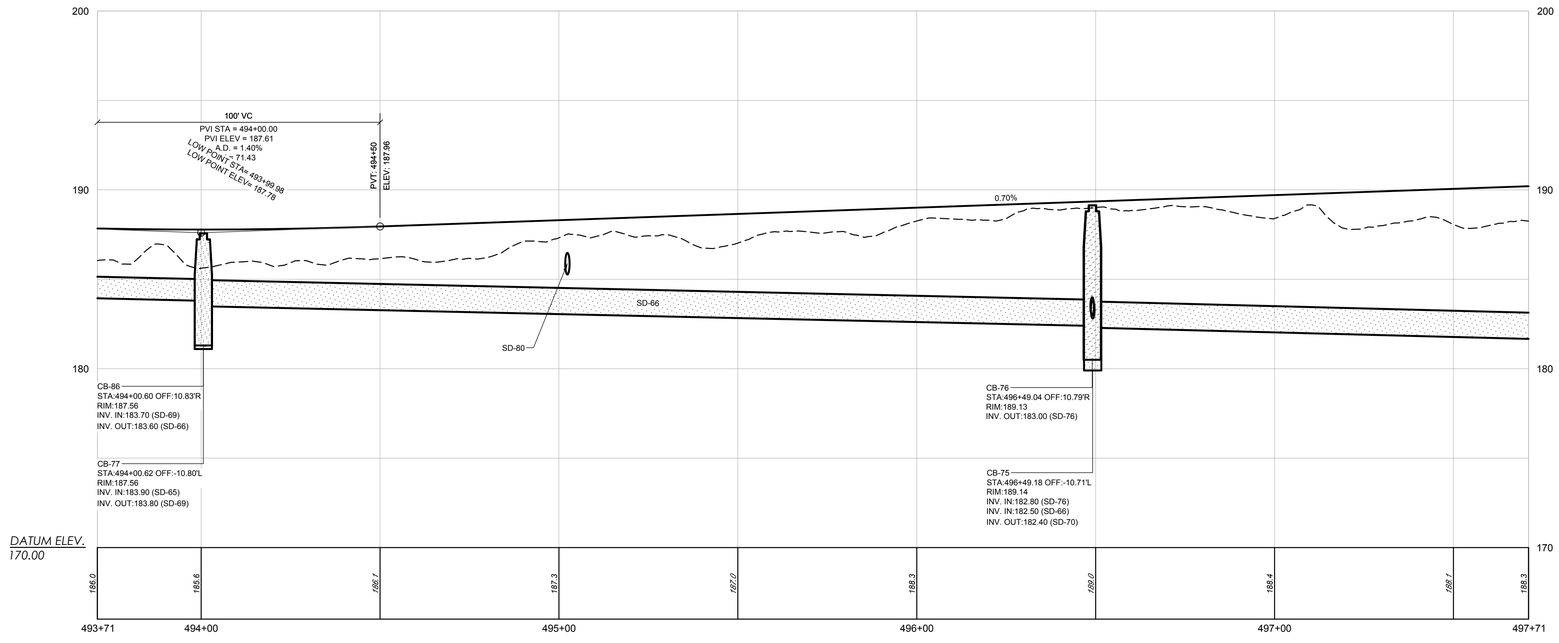
RECORD OWNER:
FREDERICK ROBIE,JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	1" = 20'
PROJECT	21483

SHEET14 OF29



PLAN VIEW - ROAD D
SCALE: 1" = 20'



PROFILE VIEW - ROAD D
SCALE: HORZ. 1" = 20'
VERT. 1" = 4'

MAP 27 LOT 20
MAP 25 LOT 8
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SHAWN M. FRANK, PE 6396

STATE OF MAINE
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PLAN & PROFILE ROAD D STA 493+71 - 497+71
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE
FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

RECORD OWNER:
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HOLDEN, ME

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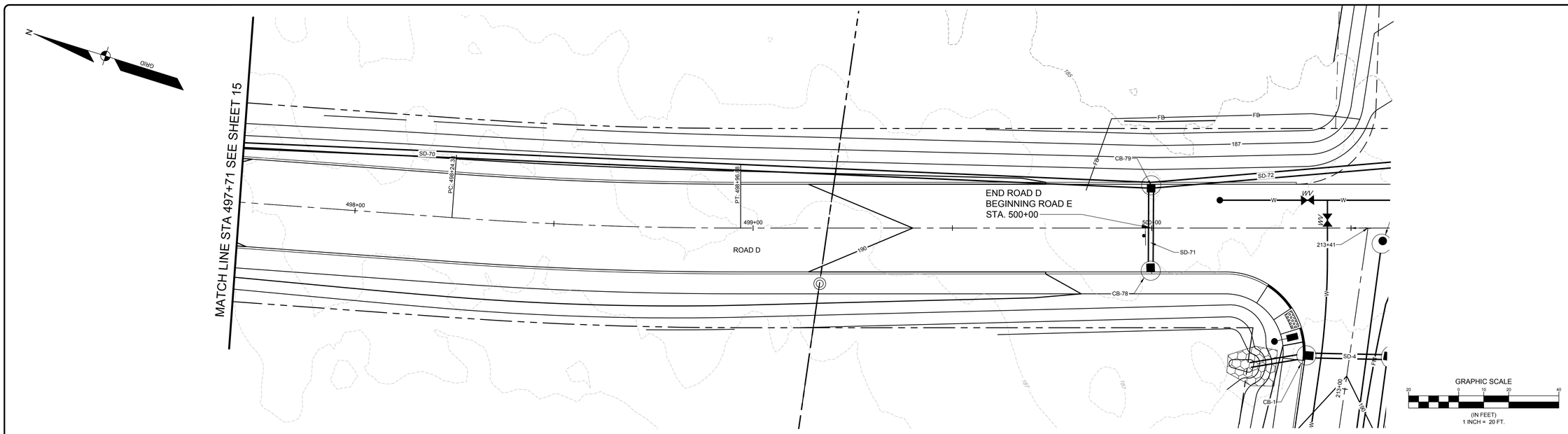
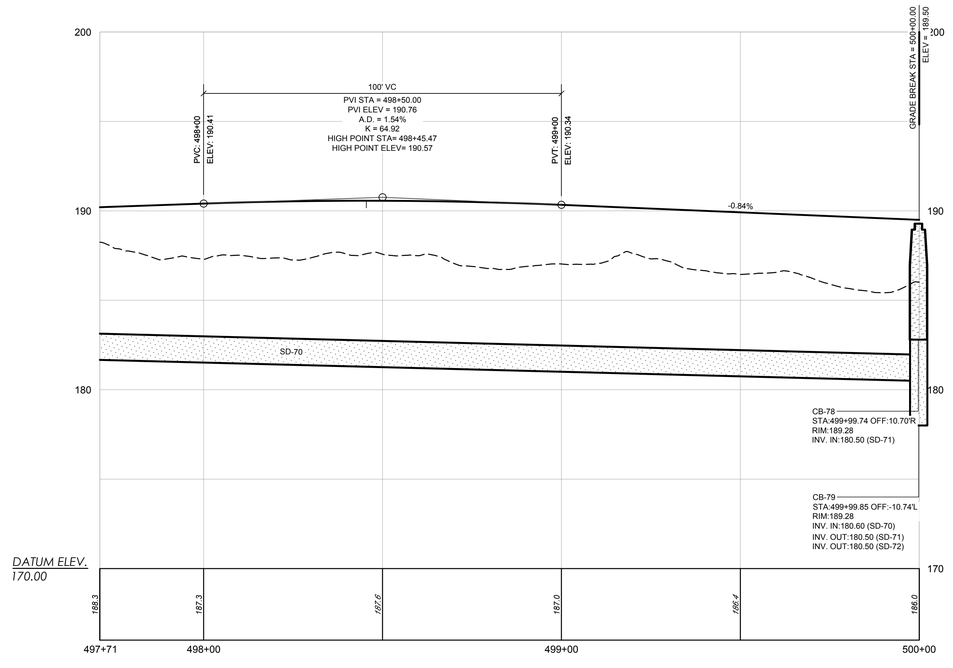


PLAN VIEW - ROAD D
SCALE: 1" = 20'



PROFILE VIEW - ROAD D
SCALE: HORZ. 1" = 20'
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MAP 27 LOT 20
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SHAWN M. FRANK, PE 6396

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PLAN & PROFILE ROAD D STA 497+71 - 500+00

OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE

FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

RECORD OWNER:
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C/O BRUCE ROBIE
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HOLDEN, ME

DESIGNED	JBP
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SCALE	1" = 20'
PROJECT	21483

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75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

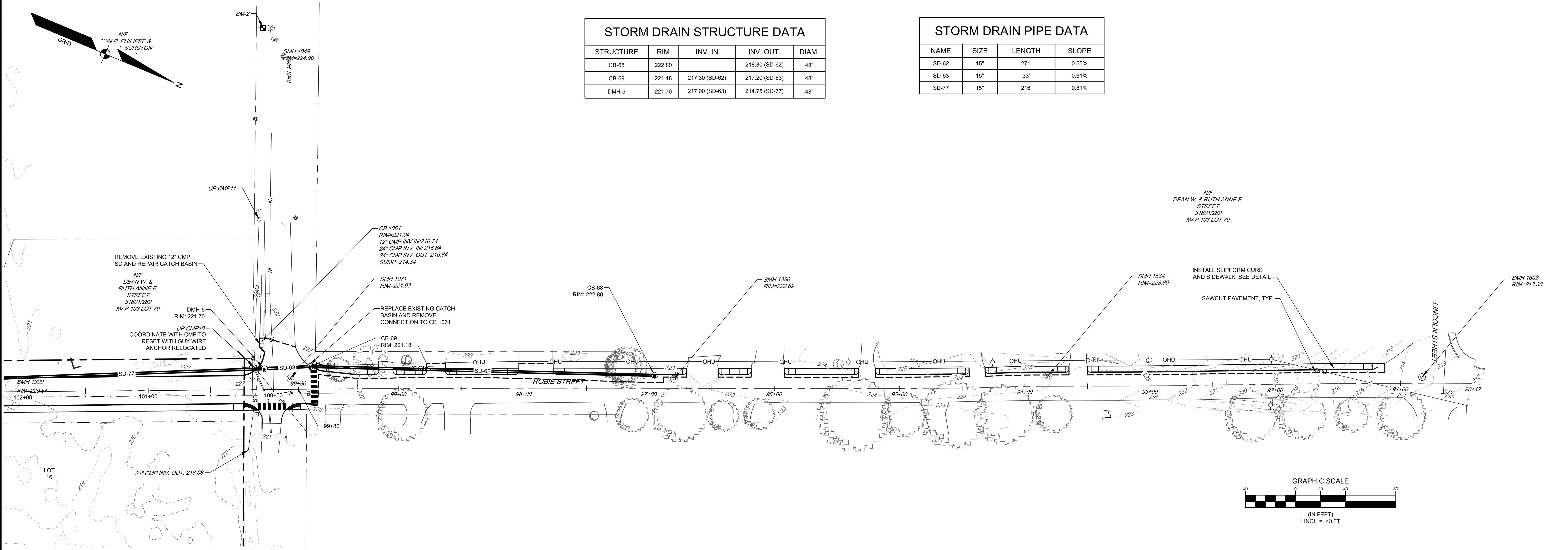
SHEET16 OF29

STORM DRAIN STRUCTURE DATA

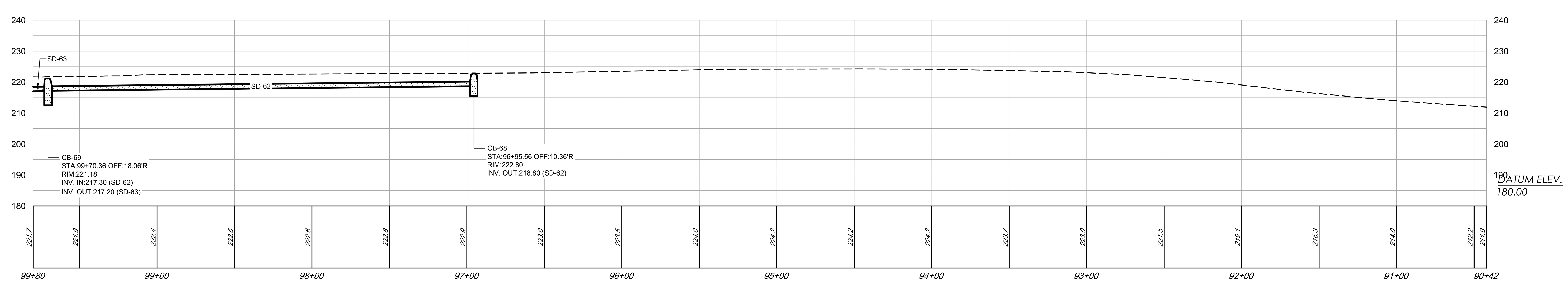
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-68	222.80		218.80 (SD-62)	48"
CB-69	221.18	217.30 (SD-62)	217.20 (SD-63)	48"
DMH-5	221.70	217.00 (SD-63)	214.75 (SD-77)	48"

STORM DRAIN PIPE DATA

NAME	SIZE	LENGTH	SLOPE
SD-62	15"	271'	0.55%
SD-63	15"	33'	0.61%
SD-77	15"	216'	0.81%



GRID
N
BM-2
SMH 1049
RIM=224.90
UP CMP11
N/F
DEAN W. & RUTH ANNE E.
STREET
31801/289
MAP 103 LOT 79
CB 1061
RIM=221.04
12" CMP INV IN:216.74
24" CMP INV. IN: 216.84
24" CMP INV. OUT: 216.84
SUMP: 214.84
REMOVE EXISTING 12" CMP
SD AND REPAIR CATCH BASIN
SMH 1071
RIM=221.93
DMH-5
RIM: 221.70
REPLACE EXISTING CATCH
BASIN AND REMOVE
CONNECTION TO CB 1061
UP CMP10
COORDINATE WITH CMP TO
RESET WITH GUY WIRE
ANCHOR RELOCATED
CB-69
RIM: 221.18
SD-77
SD-63
SD-62
SMH 1309
RIM=220.54
102+00
101+00
100+00
99+80
99+00
98+00
97+00
96+00
95+00
94+00
93+00
92+00
91+00
90+42
ROBIE STREET
LOT
16
24" CMP INV. OUT: 218.08
CB-68
RIM: 222.80
SMH 1350
RIM=222.69
SMH 1534
RIM=223.89
INSTALL SLIPFORM CURB
AND SIDEWALK, SEE DETAIL
SAWCUT PAVEMENT, TYP.
LINCOLN STREET
SMH 1602
RIM=213.30
OHU
GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1 INCH = 40 FT.



240
230
220
210
200
190
180
SD-63
SD-62
CB-69
STA:99+70.36 OFF:18.06'R
RIM:221.18
INV. IN:217.30 (SD-62)
INV. OUT:217.20 (SD-63)
CB-68
STA:96+95.56 OFF:10.36'R
RIM:222.80
INV. OUT:218.80 (SD-62)
DATUM ELEV.
180.00
221.7 221.9 222.4 222.5 222.6 222.8 222.9 223.0 223.5 224.0 224.2 224.2 224.2 223.7 223.0 221.5 219.1 216.3 214.0 212.2 211.9
99+80 99+00 98+00 97+00 96+00 95+00 94+00 93+00 92+00 91+00 90+42

ROBIE STREET
SCALE:
H: 1" = 40'
V: 1" = 20'

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396

STATE OF MAINE
SHAWN M.
FRANK
No. 6396
LICENSED
PROFESSIONAL ENGINEER
12-21-2023

REV:	BY:	DATE:	STATUS:
C	SMF	12-21-2023	SUBMISSION TO DEP FOR STORMWATER LAW
B	SMF	11-13-2023	PRELIMINARY SUBDIVISION COMMENT RESPONSE SUBMISSION
A	SMF	08-21-2023	PRELIMINARY SUBDIVISION PLAN SUBMISSION TO TOWN

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Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

PLAN & PROFILE ROBIE ST STA 90+42 - 99+80

OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE

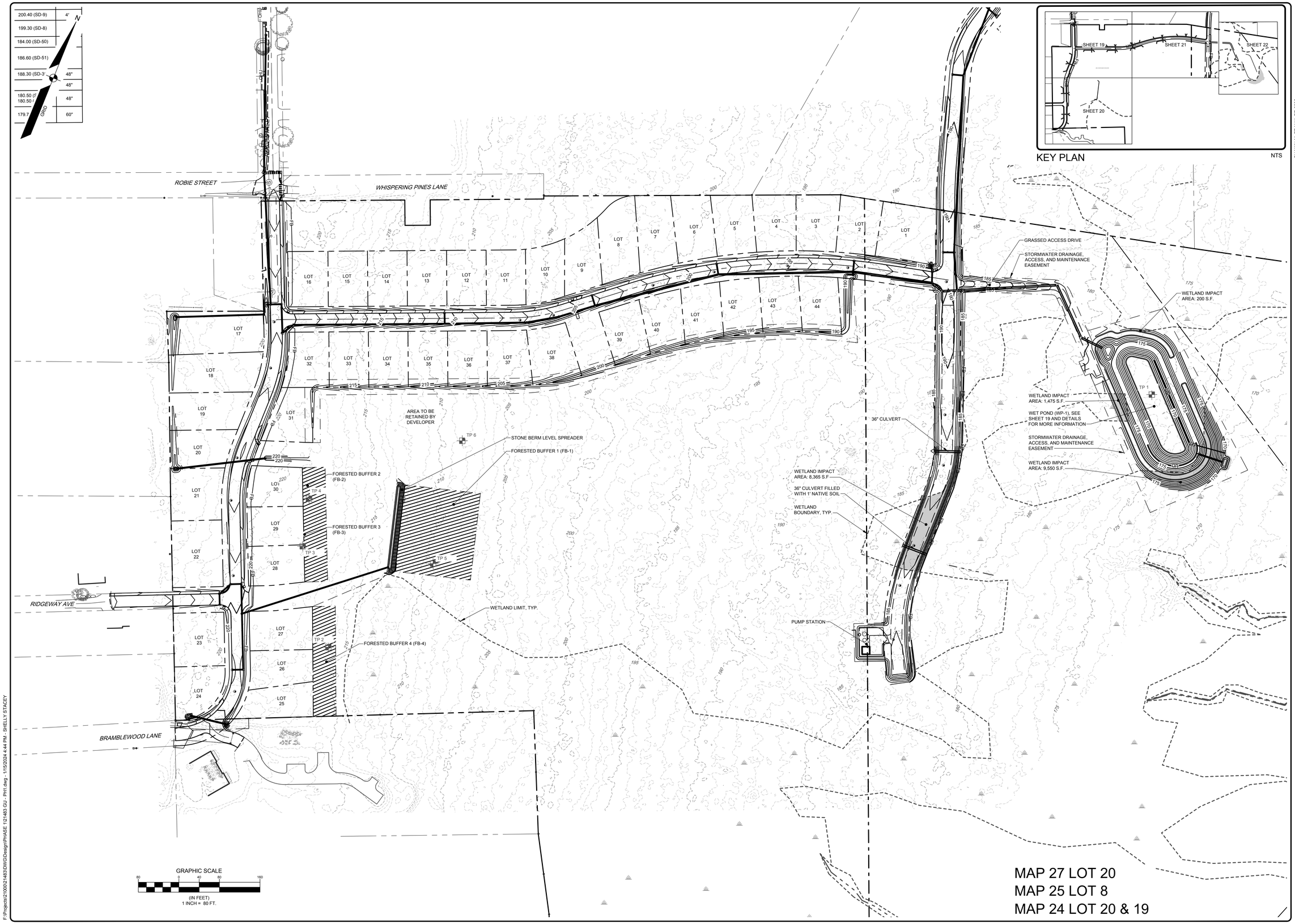
RECORD OWNER:
FREDERICK ROBIE,JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	########
PROJECT	21483

SHEET 1 OF 1

21483 SIDEWALK PLAN.dwg, TAB:XX ROBIE STREET SIDEWALK PP
F:\Projects\21000\21483\DWG\Design\PHASE 1\21483 SIDEWALK PLAN.dwg - 1/15/2024 4:43 PM - SHELLY STACEY



KEY PLAN NTS

SHAWN M. FRANK, PE 6396

STATE OF MAINE
SHAWN M. FRANK
No. 6396
PROFESSIONAL ENGINEER
12-21-2023

REV/	BY:	DATE:	STATUS
A	SMF	08-21-2023	PRELIMINARY SUBDIVISION PLAN SUBMISSION TO TOWN
B	SMF	11-13-2023	PRELIMINARY SUBDIVISION COMMENT RESPONSE SUBMISSION
C	SMF	12-21-2023	SUBMISSION TO DEP FOR STORMWATER LAW

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Tel. 207-200-2100

OVERALL GRADING PLAN
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE
FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

RECORD OWNER:
FREDERICK ROBIE, JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	1" = 80'
PROJECT	21483

SHEET18 OF29

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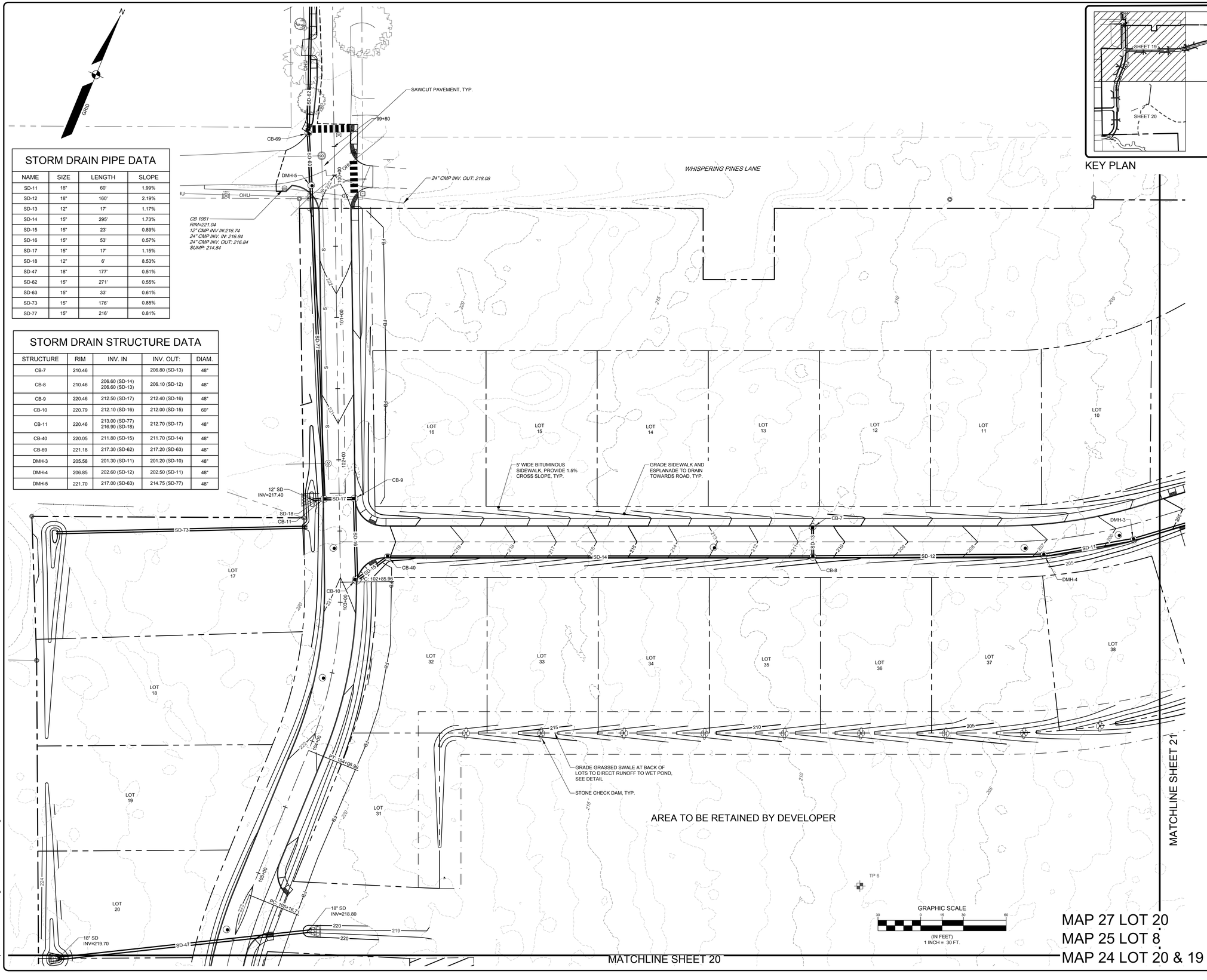
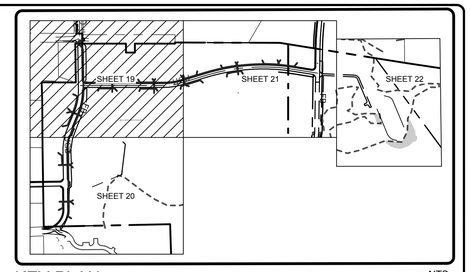
STORM DRAIN PIPE DATA

NAME	SIZE	LENGTH	SLOPE
SD-11	18"	60'	1.99%
SD-12	18"	160'	2.19%
SD-13	12"	17'	1.17%
SD-14	15"	295'	1.73%
SD-15	15"	23'	0.89%
SD-16	15"	53'	0.57%
SD-17	15"	17'	1.15%
SD-18	12"	6'	8.53%
SD-47	18"	177'	0.51%
SD-62	15"	271'	0.55%
SD-63	15"	33'	0.61%
SD-73	15"	176'	0.85%
SD-77	15"	216'	0.81%

STORM DRAIN STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-7	210.46		206.80 (SD-13)	48"
CB-8	210.46	206.60 (SD-14) 206.60 (SD-13)	206.10 (SD-12)	48"
CB-9	220.46	212.50 (SD-17)	212.40 (SD-16)	48"
CB-10	220.79	212.10 (SD-16)	212.00 (SD-15)	60"
CB-11	220.46	213.00 (SD-77) 216.90 (SD-18)	212.70 (SD-17)	48"
CB-40	220.05	211.80 (SD-15)	211.70 (SD-14)	48"
CB-69	221.18	217.30 (SD-62)	217.20 (SD-63)	48"
DMH-3	205.58	201.30 (SD-11)	201.20 (SD-10)	48"
DMH-4	206.85	202.60 (SD-12)	202.50 (SD-11)	48"
DMH-5	221.70	217.00 (SD-63)	214.75 (SD-77)	48"





KEY PLAN NTS

SHAWN M. FRANK, PE 6396

STATE OF MAINE
SHAWN M. FRANK
No. 6396
PROFESSIONAL ENGINEER
12-21-2023

REV.	BY:	DATE:	STATUS
C	SMF	12.21.2023	SUBMISSION TO DEP FOR STORMWATER LAW
B	SMF	11.13.2023	PRELIMINARY SUBDIVISION COMMENT RESPONSE SUBMISSION
A	SMF	08.21.2023	PRELIMINARY SUBDIVISION PLAN SUBMISSION TO TOWN

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Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

GRADING PLAN 1
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE
FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

RECORD OWNER:
FREDERICK ROBIE, JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	1" = 30'
PROJECT	21483

SHEET19 OF29

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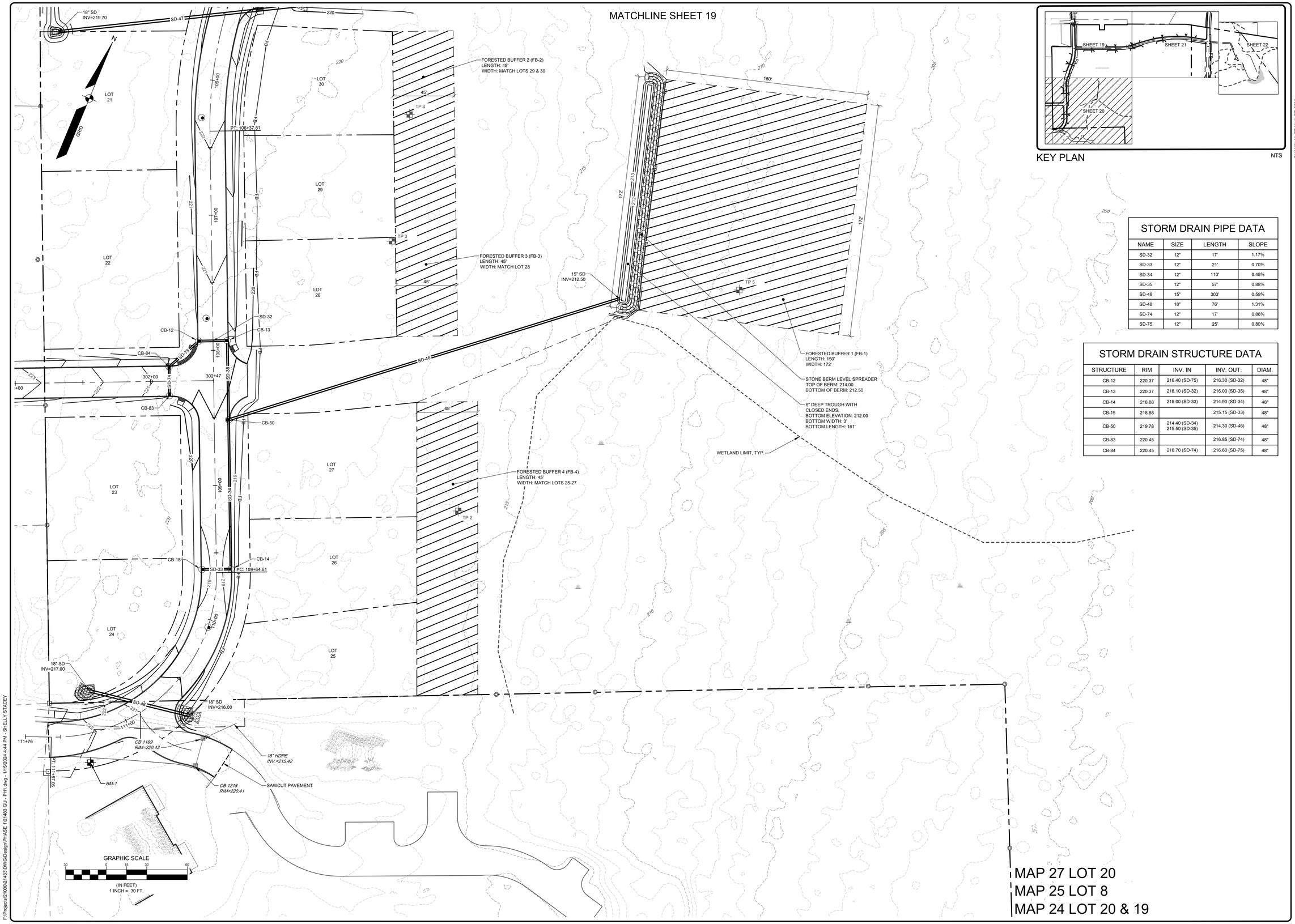
MATCHLINE SHEET 19



KEY PLAN NTS

STORM DRAIN PIPE DATA

NAME	SIZE	LENGTH	SLOPE
SD-32	12"	17'	1.17%
SD-33	12"	21'	0.70%
SD-34	12"	110'	0.45%
SD-35	12"	57'	0.88%
SD-46	15"	303'	0.59%
SD-48	18"	76'	1.31%
SD-74	12"	17'	0.86%
SD-75	12"	25'	0.80%

STORM DRAIN STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-12	220.37	216.40 (SD-75)	216.30 (SD-32)	48"
CB-13	220.37	216.10 (SD-32)	216.00 (SD-35)	48"
CB-14	218.88	215.00 (SD-33)	214.90 (SD-34)	48"
CB-15	218.88		215.15 (SD-33)	48"
CB-50	219.78	214.40 (SD-34) 215.50 (SD-35)	214.30 (SD-46)	48"
CB-83	220.45		216.85 (SD-74)	48"
CB-84	220.45	216.70 (SD-74)	216.60 (SD-75)	48"

SHAWN M. FRANK, PE 6396

STATE OF MAINE
SHAWN M. FRANK
No. 6396
PROFESSIONAL ENGINEER
12-21-2023

REV.	BY:	DATE:	STATUS
C	SMF	12.21.2023	SUBMISSION TO DEP FOR STORMWATER LAW
B	SMF	11.13.2023	PRELIMINARY SUBDIVISION COMMENT RESPONSE SUBMISSION
A	SMF	08.21.2023	PRELIMINARY SUBDIVISION PLAN SUBMISSION TO TOWN

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GRADING PLAN 2
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE
FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

RECORD OWNER:
FREDERICK ROBIE, JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	1" = 30'
PROJECT	21483

SHEET20 OF29

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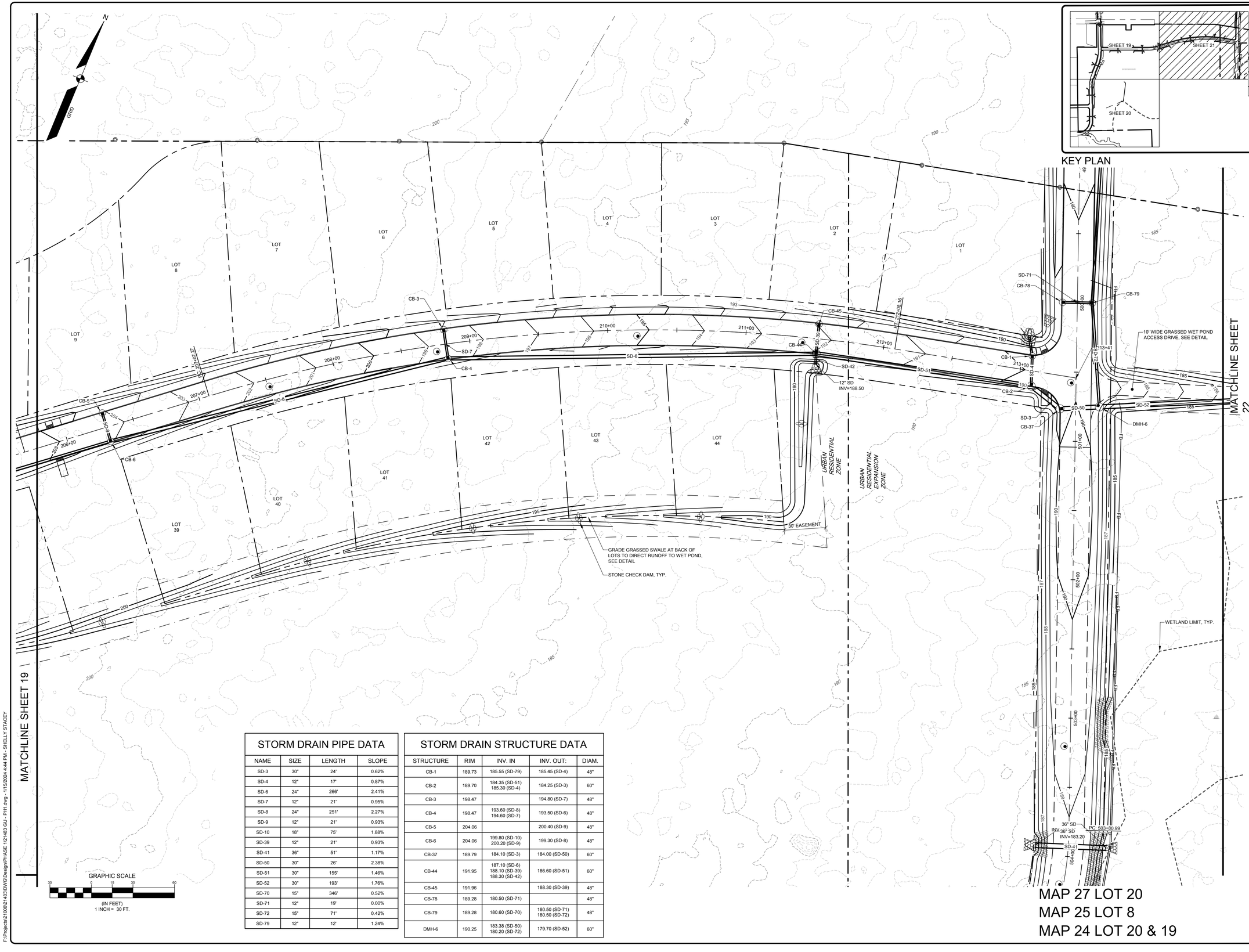

KEY PLAN NTS

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 INCH = 30 FT.

STORM DRAIN PIPE DATA

NAME	SIZE	LENGTH	SLOPE
SD-3	30"	24'	0.62%
SD-4	12"	17'	0.87%
SD-6	24"	266'	2.41%
SD-7	12"	21'	0.95%
SD-8	24"	251'	2.27%
SD-9	12"	21'	0.93%
SD-10	18"	75'	1.88%
SD-39	12"	21'	0.93%
SD-41	36"	51'	1.17%
SD-50	30"	26'	2.38%
SD-51	30"	155'	1.46%
SD-52	30"	193'	1.76%
SD-70	15"	346'	0.52%
SD-71	12"	19'	0.00%
SD-72	15"	71'	0.42%
SD-79	12"	12'	1.24%

STORM DRAIN STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-1	189.73	185.55 (SD-79)	185.45 (SD-4)	48"
CB-2	189.70	184.35 (SD-51) 185.30 (SD-4)	184.25 (SD-3)	60"
CB-3	198.47		194.80 (SD-7)	48"
CB-4	198.47	193.60 (SD-8) 194.60 (SD-7)	193.50 (SD-6)	48"
CB-5	204.06		200.40 (SD-9)	48"
CB-6	204.06	199.80 (SD-10) 200.20 (SD-9)	199.30 (SD-8)	48"
CB-37	189.79	184.10 (SD-3)	184.00 (SD-50)	60"
CB-44	191.95	187.10 (SD-6) 188.10 (SD-39) 188.30 (SD-42)	186.60 (SD-51)	60"
CB-45	191.96		188.30 (SD-39)	48"
CB-78	189.28	180.50 (SD-71)		48"
CB-79	189.28	180.60 (SD-70)	180.50 (SD-71) 180.50 (SD-72)	48"
DMH-6	190.25	183.38 (SD-50) 180.20 (SD-72)	179.70 (SD-52)	60"

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

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SHAWN M. FRANK, PE 6396

STATE OF MAINE
SHAWN M. FRANK
No. 6396
PROFESSIONAL ENGINEER
12-21-2023

REV.	BY:	DATE:	STATUS:
C.	SMF	12-21-2023	SUBMISSION TO DEP FOR STORMWATER LAW
B.	SMF	11-13-2023	PRELIMINARY SUBDIVISION COMMENT RESPONSE SUBMISSION
A.	SMF	08-21-2023	PRELIMINARY SUBDIVISION PLAN SUBMISSION TO TOWN

GRADING PLAN 3
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE
FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

RECORD OWNER:
FREDERICK ROBIE, JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	1" = 30'
PROJECT	21483

SHEET21 OF29

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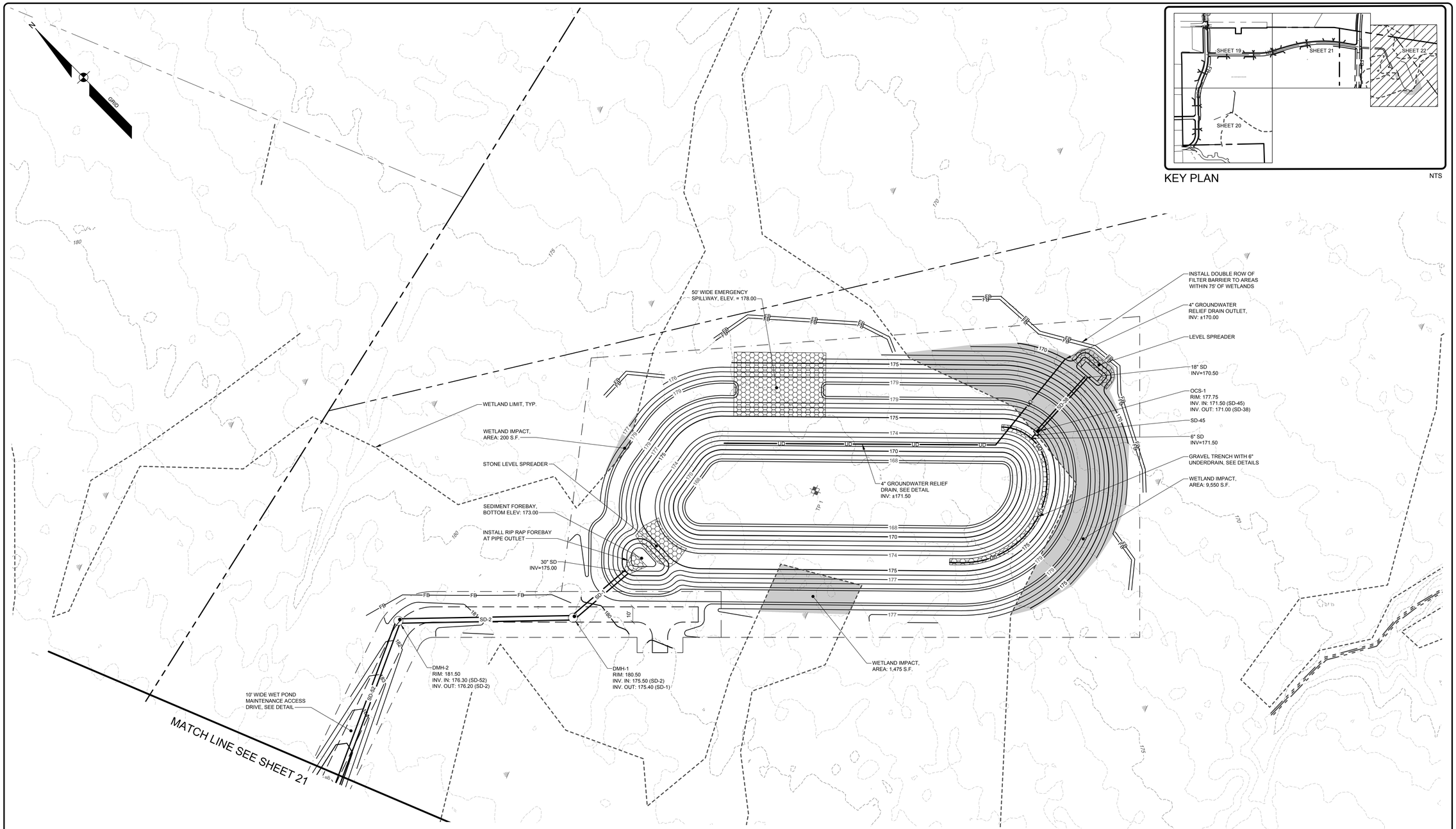

KEY PLAN NTS

STORM DRAIN STRUCTURE DATA				
STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
DMH-1	180.50	175.50 (SD-2)	175.40 (SD-1)	60"
DMH-2	181.50	176.30 (SD-52)	176.20 (SD-2)	60"
OCS-1	177.75	171.50 (SD-45)	171.00 (SD-38)	48"

STORM DRAIN PIPE DATA			
NAME	SIZE	LENGTH	SLOPE
SD-1	30"	44'	0.91%
SD-2	30"	109'	0.64%
SD-38	18"	45'	1.10%
SD-45	6"	5'	0.00%
SD-50	30"	26'	2.38%

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 INCH = 30 FT.

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396

STATE OF MAINE * SHAWN M. FRANK * No. 6396 * REGISTERED PROFESSIONAL ENGINEER * 12-21-2023

REV.	BY	DATE:	STATUS
C.	SMF	12-21-2023	SUBMISSION TO DEP FOR STORMWATER LAW
B.	SMF	11-13-2023	PRELIMINARY SUBDIVISION COMMENT RESPONSE SUBMISSION
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South Portland, ME 04106
Tel. 207-200-2100

BMP PLAN 1 - WET POND
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET,
GORHAM, MAINE
FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

RECORD OWNER:
FREDERICK ROBIE, JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	1" = 30'
PROJECT	21483

SHEET22 OF29

EROSION CONTROL MEASURES

PRE-CONSTRUCTION PHASE

PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, SEDIMENT BARRIERS (SILT FENCE) WILL BE STAKED/INSTALLED ACROSS THE SLOPE(S), ON THE CONTOUR AT OR JUST BELOW THE LIMITS OF CLEARING OR GRUBBING, AND/OR JUST ABOVE ANY ADJACENT PROPERTY LINE OR WATERCOURSE TO PROTECT AGAINST CONSTRUCTION RELATED EROSION. THE PLACEMENT OF SEDIMENT BARRIERS SHALL BE COMPLETED IN ACCORDANCE WITH GUIDELINES ESTABLISHED IN BEST MANAGEMENT PRACTICES AND IN ACCORDANCE WITH THIS EROSION CONTROL PLAN AND DETAILS IN THIS PLAN SET. THIS NETWORK IS TO BE MAINTAINED BY THE CONTRACTOR UNTIL ALL EXPOSED SLOPES HAVE AT LEAST 90% VIGOROUS PERENNIAL VEGETATIVE COVER TO PREVENT EROSION. TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED.

PRIOR TO ANY CLEARING OR GRUBBING, A CONSTRUCTION ENTRANCE/EXIT SHALL BE CONSTRUCTED AT THE INTERSECTION OF THE PROPOSED ENTRANCES AND EXISTING ROADWAY TO AVOID TRACKING OF MUD, DUST AND DEBRIS FROM THE SITE.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PREPARE A DETAILED SCHEDULE AND MARKED UP PLAN INDICATING AREAS AND COMPONENTS OF THE WORK AND KEY DATES SHOWING DATE OF DISTURBANCE AND COMPLETION OF THE WORK. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE MUNICIPAL STAFF. THREE COPIES OF THE SCHEDULE AND MARKED UP PLAN SHALL BE PROVIDED TO THE MUNICIPALITY THREE DAYS PRIOR TO THE SCHEDULED PRE-CONSTRUCTION MEETING. SPECIAL ATTENTION SHALL BE GIVEN TO THE 14 DAY LIMIT OF DISTURBANCE IN THE SCHEDULE ADDRESSING TEMPORARY AND PERMANENT VEGETATION MEASURES.

CONSTRUCTION AND POST-CONSTRUCTION PHASE

AREAS UNDERGOING ACTUAL CONSTRUCTION SHALL ONLY EXPOSE THAT AMOUNT OF MINERAL SOIL NECESSARY FOR PROGRESSIVE AND EFFICIENT CONSTRUCTION. AN AREA CONSIDERED OPEN IS ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MATS, RIPRAP OR GRAVEL BASE ON A ROAD, SUCH AS ACTIVE EXCAVATION AND ACTIVE GRADING. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS ACTIVELY OCCURRING OR CAN BE MULCHED IN THE SAME DAY. OPEN AREAS SHALL BE ANCHORED WITH TEMPORARY EROSION CONTROL AS SHOWN ON THE DESIGN PLANS AND AS DESCRIBED WITHIN THIS EROSION CONTROL PLAN WITHIN SEVEN (7) DAYS OF DISTURBANCE. AREAS LOCATED WITHIN 100 FEET OF STREAMS SHALL BE ANCHORED WITH TEMPORARY EROSION CONTROL WITHIN SEVEN (7) DAYS. REFER TO WINTER EROSION CONTROL NOTES FOR THE TREATMENT OF OPEN AREAS AFTER OCTOBER 1ST OF THE CONSTRUCTION YEAR.

THE CONTRACTOR MUST INSTALL ANY ADDED MEASURES WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION FROM THE SITE DEPENDENT UPON THE ACTUAL SITE AND WEATHER CONDITIONS. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, IN ORDER TO MINIMIZE AREAS WITHOUT EROSION CONTROL PROTECTION.

EROSION CONTROL APPLICATIONS & MEASURES
THE PLACEMENT OF EROSION CONTROL MEASURES SHALL BE COMPLETED IN ACCORDANCE WITH GUIDELINES ESTABLISHED IN BEST MANAGEMENT PRACTICES AND IN ACCORDANCE WITH THE EROSION CONTROL PLAN AND DETAILS IN THE PLAN SET.

1. TEMPORARY MULCHING:

ALL DISTURBED AREAS SHALL BE MULCHED WITH MATERIALS SPECIFIED BELOW PRIOR TO ANY STORM EVENT. ALL DISTURBED AREAS NOT FINAL GRADED WITHIN 14 DAYS SHALL BE MULCHED. DISTURBED AREAS ADJACENT TO NATURAL RESOURCES THAT ARE NOT GRADED WITHIN SEVEN (7) DAYS SHALL BE MULCHED. ALSO, AREAS, WHICH HAVE BEEN TEMPORARILY OR PERMANENTLY SEEDED, SHALL BE MULCHED IMMEDIATELY FOLLOWING SEEDING. EROSION CONTROL BLANKETS ARE RECOMMENDED TO BE USED AT THE BASE OF GRASSED WATERWAYS AND ON SLOPES GREATER THAN 33%. MULCH ANCHORING SHOULD BE USED ON SLOPES GREATER THAN 5% AFTER SEPTEMBER 15TH OF THE CONSTRUCTION YEAR (SEE WINTER EROSION CONTROL NOTES).
TYPES OF MULCH:

HAY OR STRAW: SHALL BE APPLIED AT A RATE OF 75 LBS/1,000 S.F. (1.5 TONS PER ACRE).

EROSION CONTROL MIX: SHALL BE PLACED EVENLY AND MUST PROVIDE 100% SOIL COVERAGE. EROSION CONTROL MIX SHALL BE APPLIED SUCH THAT THE THICKNESS ON SLOPES 3:1 OR LESS IS 2 INCHES PLUS 1/2 INCH PER 20 FEET OF SLOPE UP TO 100 FEET. THE THICKNESS ON SLOPES BETWEEN 3:1 AND 2:1 SHALL BE 4 INCHES PLUS 1/2 INCH PER 20 FEET OF SLOPE UP TO 100 FEET. THIS SHALL NOT BE USED ON SLOPES GREATER THAN 2:1.

EROSION CONTROL BLANKET: SHALL BE INSTALLED SUCH THAT CONTINUOUS CONTACT BETWEEN THE MAT AND THE SOIL IS OBTAINED. INSTALL BLANKETS AND STAPLE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

2. SOIL STOCKPILES:

STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED WITH HAY OR STRAW AT A RATE OF 75 LBS/1,000 S.F. (1.5 TONS PER ACRE) OR WITH A FOUR-INCH LAYER OF WOOD WASTE EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STOCKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL. ANY SOIL STOCKPILE WILL NOT BE PLACED (EVEN COVERED WITH HAY OR STRAW) WITHIN 100 FEET FROM ANY NATURAL RESOURCES. SEDIMENT BARRIERS SHALL BE INSTALLED DOWNGRADIENT OF STOCKPILES, AND STORMWATER SHALL BE PREVENTED FROM RUNNING ONTO THE STOCKPILE.

3. NATURAL RESOURCES PROTECTION:

ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCES SHALL BE MULCHED USING TEMPORARY MULCHING (AS DESCRIBED IN PART 1 OF THIS SECTION) WITHIN 7 DAYS OF EXPOSURE OR PRIOR TO ANY STORM EVENT. SEDIMENT BARRIERS (AS DESCRIBED IN PART 4 OF THIS SECTION) SHALL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA. PROJECTS CROSSING THE NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE.

4. SEDIMENT BARRIERS:

PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, SEDIMENT BARRIERS SHALL BE STAKED ACROSS THE SLOPE(S), ON THE CONTOUR AT OR JUST BELOW THE LIMITS OF CLEARING OR GRUBBING, AND/OR JUST ABOVE ANY ADJACENT PROPERTY LINE OR WATERCOURSE TO PROTECT AGAINST CONSTRUCTION RELATED EROSION. SEDIMENT BARRIERS SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL ALL EXPOSED SLOPES HAVE AT LEAST 90% VIGOROUS PERENNIAL VEGETATIVE COVER TO PREVENT EROSION.

SILT FENCE: SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THE EFFECTIVE HEIGHT OF THE FENCE SHALL NOT EXCEED 36 INCHES. IT IS RECOMMENDED THAT SILT FENCE BE REMOVED BY CUTTING THE FENCE MATERIALS AT GROUND LEVEL SO AS TO AVOID ADDITIONAL SOIL DISTURBANCE.

HAY BALES: SHALL NOT BE INSTALLED ADJACENT TO WETLAND. INSTALL PER THE DETAIL ON THE PLANS. BALES SHALL BE WIRE-BOUND OR STRING-TIED AND THESE BINDINGS MUST REMAIN PARALLEL WITH THE GROUND SURFACE DURING INSTALLATION TO PREVENT DETERIORATION OF THE BINDINGS. BALES SHALL BE INSTALLED WITHIN A MINIMUM 4 INCH DEEP TRENCH LINE WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.

EROSION CONTROL MIX: SHALL NOT BE USED ADJACENT TO WETLANDS. INSTALL PER THE DETAIL ON THE PLANS. THE MIX SHALL CONSIST PRIMARILY OF ORGANIC MATERIAL AND CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4 INCHES IN DIAMETER. THE MIX COMPOSITION SHALL MEET THE STANDARDS DESCRIBED WITHIN THE MDEP BEST MANAGEMENT PRACTICES. NO TRENCHING IS REQUIRED FOR INSTALLATION OF THIS BARRIER. EROSION CONTROL MIX BERMS SHALL NOT BE USED AT THE BOTTOM OF STEEP SLOPES (>8%) OR SLOPES WITH FLOWING WATER.

CONTINUOUS CONTAINED BERM: SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THIS SEDIMENT BARRIER IS EROSION CONTROL MIX PLACED WITHIN A SYNTHETIC TUBULAR NETTING AND PERFORMS AS A STURDY SEDIMENT BARRIER THAT WORKS WELL ON HARD GROUND SUCH AS FROZEN CONDITIONS, TRAVELED AREAS OR PAVEMENT. NO TRENCHING IS REQUIRED FOR INSTALLATION OF THIS BARRIER.

5. TEMPORARY CHECK DAMS:

SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. CHECK DAMS ARE TO BE PLACED WITHIN DITCHES/ SWALES AS SPECIFIED ON THE DESIGN PLANS IMMEDIATELY AFTER FINAL GRADING. CHECK DAMS SHALL BE 2 FEET HIGH. TEMPORARY CHECK DAMS MAY BE REMOVED ONLY AFTER THE ROADWAYS ARE PAVED AND THE VEGETATED SWALE ARE ESTABLISHED WITH AT LEAST 90% OF VIGOROUS PERENNIAL GROWTH. THE AREA BENEATH THE CHECK DAM MUST BE SEEDED AND MULCHED IMMEDIATELY AFTER REMOVAL OF THE CHECK DAM.

STONE CHECK DAMS: STONE DAMS SHOULD BE CONSTRUCTED OF 2 TO 3 INCH STONE AND PLACED SUCH THAT COMPLETE COVERAGE OF THE SWALE IS OBTAINED AND THAT THE CENTER OF THE DAM IS 6 INCHES LOWER THAT THE OUTER EDGES.

HAY BALE CHECK DAMS: BALES SHALL BE WIRE-BOUND OR STRING-TIED. BALES SHALL BE INSTALLED WITHIN A MINIMUM 4 INCH DEEP TRENCH LINE WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER. HAY BALES SHALL BE PLACED SUCH THAT COMPLETE COVERAGE OF THE SWALE IS OBTAINED AND THAT THE CENTER OF THE DAM IS 6 INCHES LOWER THAT THE OUTER EDGES.

MANUFACTURED CHECK DAMS: MANUFACTURED CHECK DAMS, AS SPECIFIED IN THE DETAIL ON THE PLANS, MAY BE USED IF AUTHORIZED BY THE PROPER LOCAL, STATE OR FEDERAL REGULATING AGENCIES. THESE UNITS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURE'S RECOMMENDATIONS.

6. STORMDRAIN INLET PROTECTION:

INLET PROTECTION SHALL BE PLACED AROUND A STORMDRAIN DROP INLET OR CURB INLET PRIOR TO PERMANENT STABILIZATION OF THE IMMEDIATE AND UPSTREAM DISTURBED AREAS. THEY SHALL BE CONSTRUCTED IN A MANNER THAT WILL FACILITATE CLEAN-OUT AND DISPOSAL OF TRAPPED SEDIMENTS AND MINIMIZE INTERFERENCE WITH CONSTRUCTION ACTIVITIES. ANY RESULTANT PONDING OF WATER FROM THE PROTECTION METHOD MUST NOT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT AREAS OR STRUCTURES.

HAY BALE DROP INLET PROTECTION: WE DO NOT RECOMMEND THE USE OF HAY BALES AS INLET PROTECTION.

CONCRETE BLOCK AND STONE INLET SEDIMENT FILTER (DROP OR CURB INLET): SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. THE HEIGHT OF THE CONCRETE BLOCK BARRIER CAN VARY BUT MUST BE BETWEEN 12 AND 24 INCHES TALL. A MINIMUM OF 1 INCH CRUSHED STONE SHALL BE USED.

MANUFACTURED SEDIMENT BARRIERS AND FILTER (DROP OR CURB INLET): MANUFACTURED FILTERS, AS SPECIFIED IN THE DETAIL ON THE PLANS, MAY BE USED IF INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

7. STABILIZED CONSTRUCTION ENTRANCE/EXIT:

PRIOR TO CLEARING AND/OR GRUBBING THE SITE A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE CONSTRUCTED WHEREVER TRAFFIC WILL EXIT THE CONSTRUCTION SITE ONTO A PAVED ROADWAY IN ORDER TO MINIMIZE THE TRACKING OF SEDIMENT AND DEBRIS FROM THE CONSTRUCTION SITE ONTO PUBLIC ROADWAYS. THE ENTRANCES AND ADJACENT ROADWAY AREAS SHALL BE PERIODICALLY SWEPT TO FURTHER MINIMIZE THE TRACKING OF MUD, DUST OR DEBRIS FROM THE CONSTRUCTION AREA. THE TERM "SWEEP" IS UNDERSTOOD TO MEAN REMOVAL AND RECOVERY OF TRACKED SEDIMENT WITH A STREET SWEEPER, NOT BRUSHING THE MATERIAL INTO SWALES OR STRUCTURES WITH A MECHANICAL BROOM. STABILIZED CONSTRUCTION EXITS SHALL BE CONSTRUCTED IN AREAS SPECIFIED ON THE PLANS AND AS DETAILED ON THE PLANS. THE CONTRACTOR SHALL MAINTAIN THE STABILIZED CONSTRUCTION ENTRANCE UNTIL ALL DISTURBED AREAS ARE STABILIZED.

DUST CONTROL:

DUST CONTROL DURING CONSTRUCTION SHALL BE ACHIEVED BY THE USE OF A WATERING TRUCK TO PERIODICALLY SPRINKLE THE EXPOSED ROADWAY AREAS AS NECESSARY TO REDUCE DUST DURING THE DRY MONTHS. APPLYING OTHER DUST CONTROL PRODUCTS SUCH AS CALCIUM CHLORIDE OR OTHER MANUFACTURED PRODUCTS ARE ALLOWED IF AUTHORIZED BY THE PROPER LOCAL, STATE AND/OR FEDERAL REGULATING AGENCIES. HOWEVER, IT IS THE CONTRACTOR'S ULTIMATE RESPONSIBILITY TO MITIGATE DUST AND SOIL LOSS FROM THE SITE. IF OFFSITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEPT IMMEDIATELY AND NOT LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS.

TEMPORARY VEGETATION:

TEMPORARY VEGETATION SHALL BE APPLIED TO DISTURBED AREAS THAT WILL NOT RECEIVE FINAL GRADING FOR PERIODS UP TO 12 MONTHS. THIS PROCEDURE SHOULD BE USED EXTENSIVELY IN AREAS ADJACENT TO NATURAL RESOURCES. SEEDBED PREPARATION AND APPLICATION OF SEED SHALL BE CONDUCTED AS INDICATED IN THE PERMANENT VEGETATION SECTION OF THIS NARRATIVE. SPECIFIC SEEDS (FAST GROWING AND SHORT LIVING) SHALL BE SELECTED FROM THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUALS FOR CONTRACTORS AND ENGINEERS, LATEST REVISION. ALTERNATIVE EROSION CONTROL MEASURES SHOULD BE USED IF SEEDING CAN NOT BE DONE BEFORE SEPTEMBER 15TH OF THE CONSTRUCTION YEAR.

PERMANENT VEGETATION:

REVEGETATION MEASURES SHALL COMMENCE IMMEDIATELY UPON COMPLETION OF FINAL GRADING OF AREAS TO BE LOAMED AND SEEDED. THE APPLICATION OF SEED SHALL BE CONDUCTED BETWEEN APRIL 1ST AND OCTOBER 1ST OF THE CONSTRUCTION YEAR, PLEASE REFER TO THE WINTER EROSION CONTROL NOTES FOR MORE DETAIL. REVEGETATION MEASURES SHALL CONSIST OF THE FOLLOWING:

SEEDBED PREPARATION:

A. FOUR (4) INCHES OF LOAM SHALL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE. LOAM SHALL BE FREE OF SUBSOIL, CLAY LUMPS, STONES AND OTHER OBJECTS OVER 2 INCHES OR LARGER IN ANY DIMENSION, AND WITHOUT WEEDS, ROOTS OR OTHER OBJECTIONABLE MATERIAL.

B. SOILS TESTS SHALL BE TAKEN AT THE TIME OF SOIL STRIPPING TO DETERMINE FERTILIZATION REQUIREMENTS. SOILS TESTS SHALL BE TAKEN PROMPTLY AS TO NOT INTERFERE WITH THE 14-DAY LIMIT ON SOIL EXPOSURE. BASED UPON TEST RESULTS, SOIL AMENDMENTS SHALL BE INCORPORATED INTO THE SOIL PRIOR TO FINAL SEEDING. IN LIEU OF SOIL TESTS, SOIL AMENDMENTS MAY BE APPLIED AS FOLLOWS:

ITEM	APPLICATION RATE
10-20-20 FERTILIZER (N-P205-K20 OR EQUAL)	18.4 LBS./1,000 S.F.
GROUND LIMESTONE (50% CALCIUM & MAGNESIUM OXIDE)	138 LBS./1,000 S.F.

C. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH PROPER EQUIPMENT. ROLL THE AREA TO FIRM THE SEEDBED EXCEPT ON CLAY OR SILTY SOILS OR COARSE SAND.

APPLICATION OF SEED:

A. SEEDING: SHALL BE CONDUCTED BETWEEN APRIL 1ST AND OCTOBER 1ST OF THE CONSTRUCTION YEAR. GENERALLY A SEED MIXTURE MAY BE APPLIED AS FOLLOWS: (CONSERVATION MIX)

SEED TYPE	APPLICATION RATE
FESCUE, FAWN	0.34 LBS/1,000 S.F. (15 LBS/ACRE)
BIRD'S FOOT TREFOIL, VARIETY NOT STATED	0.28 LBS/1,000 S.F. (12 LBS/ACRE)
ANNUAL RYEGRASS	0.18 LBS/1,000 S.F. (8 LBS/ACRE)
TIMOTHY, CLIMAX	0.18 LBS/1,000 S.F. (8 LBS/ACRE)
ALSIKE CLOVER	0.11 LBS/1,000 S.F. (5 LBS/ACRE)
REDTOP	0.05 LBS/1,000 S.F. (2 LBS/ACRE)
TOTAL	1.14 LBS/1,000 S.F. (50 LBS/ACRE)

NOTE: A SPECIFIC SEED MIXTURE SHOULD BE CHOSEN TO MATCH THE SOILS CONDITION OF THE SITE. VARIOUS AGENCIES CAN RECOMMEND SEED MIXTURES. MDEP RECOMMENDED SEED MIXTURES ARE IN THE EROSION AND SEDIMENT CONTROL BMP MANUAL DATED 2016 OR LATEST REVISION.

B. HYDROSEEDING: SHALL BE CONDUCTED ON PREPARED AREAS WITH SLOPES LESS THAN 2:1. LIME AND FERTILIZER MAY BE APPLIED SIMULTANEOUSLY WITH THE SEED. RECOMMENDED SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING.

C. MULCHING: SHALL COMMENCE IMMEDIATELY AFTER SEED IS APPLIED. REFER TO THE TEMPORARY MULCHING SECTION OF THIS NARRATIVE FOR DETAILS.

SODDING:
FOLLOWING SEEDBED PREPARATION, SOD CAN BE APPLIED IN LIEU OF SEEDING IN AREAS WHERE IMMEDIATE VEGETATION IS MOST BENEFICIAL SUCH AS DITCHES, AROUND STORMWATER DROP INLETS AND AREAS OF AESTHETIC VALUE. SOD SHOULD BE LAID AT RIGHT ANGLES TO THE DIRECTION OF FLOW, STARTING AT THE LOWEST ELEVATION. SOD SHOULD BE ROLLED OR TAMPED DOWN TO EVEN OUT THE JOINTS ONCE LAID DOWN. WHERE FLOW IS PREVALENT THE SOD MUST BE PROPERLY ANCHORED DOWN. IRRIGATE THE SOD IMMEDIATELY AFTER INSTALLATION. IN MOST CASES, SOD CAN BE ESTABLISHED BETWEEN APRIL 1ST AND NOVEMBER 15TH OF THE CONSTRUCTION YEAR, HOWEVER, REFER TO THE WINTER EROSION CONTROL NOTES FOR ANY ACTIVITIES AFTER OCTOBER 1ST.

STANDARDS FOR TIMELY STABILIZATION:

STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES -- THE CONTRACTOR WILL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 15. THE CONTRACTOR WILL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 15. THE MDEP WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% (10H:1V) TO BE A SLOPE. IF THE CONTRACTOR FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 15, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.

A. STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS -- BY OCTOBER 1 THE CONTRACTOR WILL SEED THE DISTURBED SLOPE WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET AND APPLY EROSION CONTROL MATS OVER THE MULCHED SLOPE. THE CONTRACTOR WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SLOPE BY NOVEMBER 1, THEN THE APPLICANT WILL COVER THE SLOPE WITH A LAYER OF WOOD WASTE COMPOST AS DESCRIBED IN ITEM 2(C.) OF THIS STANDARD OR WITH STONE RIPRAP AS DESCRIBED IN ITEM 2(D.) OF THIS STANDARD.
B. STABILIZE THE SLOPE WITH SOD -- THE CONTRACTOR WILL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE APPLICANT WILL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V).
C. STABILIZE THE SLOPE WITH WOOD WASTE COMPOST -- THE CONTRACTOR WILL PLACE A SIX-INCH LAYER OF WOOD WASTE COMPOST ON THE SLOPE BY NOVEMBER 15. PRIOR TO PLACING THE WOOD WASTE COMPOST, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. THE APPLICANT WILL NOT USE WOOD WASTE COMPOST TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
D. STABILIZE THE SLOPE WITH STONE RIPRAP -- THE CONTRACTOR WILL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE APPLICANT WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOILS -- BY SEPTEMBER 15 THE CONTRACTOR WILL SEED AND MULCH ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15%. IF THE CONTRACTOR FAILS TO STABILIZE THESE SOILS BY THIS DATE, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.

A. STABILIZE THE SOIL WITH TEMPORARY VEGETATION -- BY OCTOBER 1 THE CONTRACTOR WILL SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. THE APPLICANT WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 15, THEN THE APPLICANT WILL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED IN ITEM 3(C.) OF THIS STANDARD.
B. STABILIZE THE SOIL WITH SOD -- THE APPLICANT WILL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
C. STABILIZE THE SOIL WITH MULCH -- BY NOVEMBER 15 THE APPLICANT WILL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. PRIOR TO APPLYING THE MULCH, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE APPLICANT WILL ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

1. MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION CYCLE. AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, AND AT LEAST EVERY SEVEN (7) DAYS, THE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES. THE CONTRACTOR SHALL PERFORM REPAIRS NO LATER THAN THE END OF THE NEXT WORKDAY, TO ALLOW CONTINUED PROPER FUNCTIONING OF THE EROSION CONTROL MEASURE. THE CONTRACTOR SHALL PROVIDE THE NECESSARY REGULATING AGENCIES WITH WRITTEN DOCUMENTATION DESCRIBING DATES OF INSPECTIONS AND NECESSARY FOLLOW-UP WORK TO MAINTAIN EROSION CONTROL MEASURES MEETING THE REQUIREMENTS OF THIS PLAN WITHIN SEVEN (7) DAYS.

2. FOLLOWING THE TEMPORARY AND/OR FINAL SEEDINGS, THE CONTRACTOR SHALL INSPECT THE WORK AREA SEMIMONTHLY UNTIL THE SEEDINGS HAVE BEEN ESTABLISHED. ESTABLISHED MEANS A MINIMUM OF 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH. RESEEDING SHALL BE CARRIED OUT BY THE CONTRACTOR WITH FOLLOW-UP INSPECTIONS IN THE EVENT OF ANY FAILURES UNTIL VEGETATION IS ADEQUATELY ESTABLISHED.

HOUSEKEEPING:

1. SPILL PREVENTION. CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS STORED ON SITE TO ENTER STORMWATER, WHICH INCLUDES STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER. THE SITE CONTRACTOR OR OPERATOR MUST DEVELOP, AND IMPLEMENT AS NECESSARY, APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING MEASURES.

2. GROUNDWATER PROTECTION. DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS. ANY PROJECT PROPOSING INFILTRATION OF STORMWATER MUST PROVIDE ADEQUATE PRE-TREATMENT OF STORMWATER PRIOR TO DISCHARGE OF STORMWATER TO THE INFILTRATION AREA, OR PROVIDE FOR TREATMENT WITHIN THE INFILTRATION AREA, IN ORDER TO PREVENT THE ACCUMULATION OF FINES, REDUCTION IN INFILTRATION RATE, AND CONSEQUENT FLOODING AND DESTABILIZATION.

3. FUGITIVE SEDIMENT AND DUST. ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL, BUT OTHER WATER ADDITIVES MAY BE CONSIDERED AS NEEDED. A STABILIZED CONSTRUCTION ENTRANCE (SCE) SHOULD BE INCLUDED TO MINIMIZE TRACKING OF MUD AND SEDIMENT. IF OFF-SITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEPT IMMEDIATELY AND NO LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. OPERATIONS DURING DRY MONTHS, THAT EXPERIENCE FUGITIVE DUST PROBLEMS, SHOULD WET DOWN UNPAVED ACCESS ROADS ONCE A WEEK OR MORE FREQUENTLY AS NEEDED WITH A WATER ADDITIVE TO SUPPRESS FUGITIVE SEDIMENT AND DUST.

4. DEBRIS AND OTHER MATERIALS. MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

5. EXCAVATION DE-WATERING. EXCAVATION DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT.

6. AUTHORIZED NON-STORMWATER DISCHARGES. IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE:
   A. DISCHARGES FROM FIREFIGHTING ACTIVITY;
   B. FIRE HYDRANT FLUSHINGS;
   C. VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED);
   D. DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS;
   E. ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS;
   F. PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED) IF DETERGENTS ARE NOT USED;
   G. UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE;
   H. UNCONTAMINATED GROUNDWATER OR SPRING WATER;
   I. FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED;
   J. UNCONTAMINATED EXCAVATION DEWATERING;
   K. POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND
   L. LANDSCAPE IRRIGATION.

7. UNAUTHORIZED NON-STORMWATER DISCHARGES. THE DEPARTMENT'S APPROVAL DOES NOT AUTHORIZE A DISCHARGE THAT IS MIXED WITH A SOURCE OF NON-STORMWATER, OTHER THAN THOSE DISCHARGES. SPECIFICALLY, THE DEPARTMENT'S APPROVAL DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING:
   A. WASTEWATER FROM THE WASHOUT OR CLEAN OUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS;
   B. FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
   C. SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND
   D. TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.

WINTER EROSION CONTROL MEASURES

THE WINTER CONSTRUCTION PERIOD IS FROM NOVEMBER 1 THROUGH APRIL 15. IF THE CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 1 THEN THE SITE NEEDS TO BE PROTECTED WITH OVER-WINTER STABILIZATION. AN AREA CONSIDERED OPEN IS ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MATS, RIPRAP OR GRAVEL BASE ON A ROAD. LIMIT THE EXPOSED AREA TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDER TAKEN DURING THE PROCEEDING 15 DAYS AND THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL THE SUBBASE GRAVEL IS INSTALLED IN ROADWAY AREAS OR THE AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH RATE SHALL BE A MINIMUM OF 150 LBS./1,000 S.F. (3 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. THE CONTRACTOR MUST INSTALL ANY ADDED MEASURES WHICH MAY BE NECESSARY TO CONTROL EROSION/SEDIMENTATION FROM THE SITE DEPENDENT UPON THE ACTUAL SITE AND WEATHER CONDITIONS. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, IN ORDER TO MINIMIZE AREAS WITHOUT EROSION CONTROL PROTECTION.

1. SOIL STOCKPILES

STOCKPILES OF SOIL OR SUBSOIL WILL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR AT 150 LBS/1,000 S.F. (3 TONS PER ACRE) OR WITH A FOUR-INCH LAYER OF WOOD WASTE EROSION CONTROL MIX. THIS WILL BE DONE WITHIN 24 HOURS OF STOCKING AND RE-ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. ANY SOIL STOCKPILE WILL NOT BE PLACED (EVEN COVERED WITH HAY OR STRAW) WITHIN 100 FEET FROM ANY NATURAL RESOURCES.

2. NATURAL RESOURCES PROTECTION

ANY AREAS WITHIN 100 FEET FROM ANY NATURAL RESOURCES, IF NOT STABILIZED WITH A MINIMUM OF 75% MATURE VEGETATION CATCH, SHALL BE MULCHED BY DECEMBER 1 AND ANCHORED WITH PLASTIC NETTING OR PROTECTED WITH EROSION CONTROL MATS. DURING WINTER CONSTRUCTION, A DOUBLE LINE OF SEDIMENT BARRIERS (I.E. SILT FENCE BACKED WITH HAY BALES OR EROSION CONTROL MIX) WILL BE PLACED BETWEEN ANY NATURAL RESOURCE AND THE DISTURBED AREA.

PROJECTS CROSSING THE NATURAL RESOURCE SHALL BE PROTECTED A MINIMUM DISTANCE OF 100 FEET ON EITHER SIDE FROM THE RESOURCE. EXISTING PROJECTS NOT STABILIZED BY DECEMBER 1 SHALL BE PROTECTED WITH THE SECOND LINE OF SEDIMENT BARRIER TO ENSURE FUNCTIONALITY DURING THE SPRING THAW AND RAINS.

3. SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS SHALL CONSIST OF WOOD WASTE FILTER BERMS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES AND SEDIMENT SILT FENCES.

4. MULCHING

ALL AREA SHALL BE CONSIDERED TO BE DENUDED UNTIL AREAS OF FUTURE LOAM AND SEED HAVE BEEN LOAMED, SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1.000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75-LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW WILL BE REMOVED DOWN TO A ONE-INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA WILL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 150 LB. PER 1.000 SQUARE FEET (3TONS/ACRE) AND ADEQUATELY ANCHORED THAT GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH.

BETWEEN THE DATES OF SEPTEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING, ASPHALT EMULSION CHEMICAL, TRACK OR WOOD CELLULOSE FIBER. WHEN GROUND SURFACE IS NOT VISIBLE THOUGH THE MULCH THEN COVER IS SUFFICIENT.
AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL BARE SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORK DAY.

5. MULCHING ON SLOPES AND DITCHES

SLOPES SHALL NOT BE LEFT EXPOSED FOR ANY EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY MULCHED AND ANCHORED WITH PEG AND NETTING OR WITH EROSION CONTROL BLANKETS. MULCHING SHALL BE APPLIED AT A RATE OF 230 LBS/1,000 S.F. ON ALL SLOPES GREATER THAN 8%. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 5%. EROSION CONTROL BLANKETS SHALL BE USED IN LIEU OF MULCH IN ALL DRAINAGE WAYS WITH SLOPES 8%. EROSION CONTROL MIX CAN BE USED TO SUBSTITUTE EROSION CONTROL BLANKETS ON ALL SLOPES EXCEPT DITCHES.

6. SEEDING

BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS BEEN LOOMED, FINAL GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. DORMANT SEEDING MAY BE SELECTED TO BE PLACED PRIOR TO THE PLACEMENT OF MULCH AND FABRIC NETTING ANCHORED WITH STAPLES. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4' OF LOAM AND SEED AT AN APPLICATION RATE OF 5LBS/1000 S.F. ALL AREAS SEEDED DURING THE WINTER WILL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS SUFFICIENTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING. SEED TYPE SHALL BE WINTER RYE.

7. INSPECTION AND MONITORING

MAINTENANCE MEASURES SHALL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION SEASON. AT A MINIMUM, AFTER EACH RAINFALL, SNOW STORM OR PERIOD OF THAWING AND RUNOFF, THE SITE CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF ALL INSTALLED EROSION CONTROL MEASURES AND PERFORM REPAIRS AS NEEDED TO INSURE THEIR CONTINUOUS FUNCTION.
FOLLOWING THE TEMPORARY AND OR FINAL SEEDING AND MULCHING, THE CONTRACTOR SHALL IN THE SPRING INSPECT AND REPAIR ANY DAMAGES AND/ OR UNESTABLISHED SPOTS. ESTABLISHED VEGETATIVE COVER MEANS A MINIMUM OF 90% OF AREAS VEGETATED WITH VIGOROUS GROWTH.

STANDARDS FOR TIMELY STABILIZATION OF CONSTRUCTION SITES DURING WINTER

1. STANDARD FOR THE TIMELY STABILIZATION OF DITCHES AND CHANNELS -- THE APPLICANT WILL CONSTRUCT AND STABILIZE ALL STONE-LINED DITCHES AND CHANNELS ON THE SITE BY NOVEMBER 15. THE APPLICANT WILL CONSTRUCT AND STABILIZE ALL GRASS-LINED DITCHES AND CHANNELS ON THE SITE BY SEPTEMBER 15. IF THE APPLICANT FAILS TO STABILIZE A DITCH OR CHANNEL TO BE GRASS-LINED BY SEPTEMBER 15, THEN THE APPLICANT WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE DITCH FOR LATE FALL AND WINTER.

   INSTALL A SOD LINING IN THE DITCH -- THE APPLICANT WILL LINE THE DITCH WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL, AND ANCHORING THE SOD WITH JUTE OR PLASTIC MESH TO PREVENT THE SOD STRIPS FROM SLOUGHING DURING FLOW CONDITIONS.
   INSTALL A STONE LINING IN THE DITCH --THE APPLICANT WILL LINE THE DITCH WITH STONE RIPRAP BY NOVEMBER 15. THE APPLICANT WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE AND LINING THICKNESS NEEDED TO WITHSTAND THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHIN THE DITCH. IF NECESSARY, THE APPLICANT WILL REGRADE THE DITCH PRIOR TO PLACING THE STONE LINING SO TO PREVENT THE STONE LINING FROM REDUCING THE DITCH'S CROSS-SECTIONAL AREA.

2. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SLOPES -- THE APPLICANT WILL CONSTRUCT AND STABILIZE STONE-COVERED SLOPES BY NOVEMBER 15. THE APPLICANT WILL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 15. THE DEPARTMENT WILL CONSIDER ANY AREA HAVING A GRADE GREATER THAN 15% (10H:1V) TO BE A SLOPE. IF THE APPLICANT FAILS TO STABILIZE ANY SLOPE TO BE VEGETATED BY SEPTEMBER 15, THEN THE APPLICANT WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER.

   STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS -- BY OCTOBER 1 THE APPLICANT WILL SEED THE DISTURBED SLOPE WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET AND APPLY EROSION CONTROL MATS OVER THE MULCHED SLOPE. THE APPLICANT WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SLOPE BY NOVEMBER 1, THEN THE APPLICANT WILL COVER THE SLOPE WITH A LAYER OF WOOD WASTE COMPOST AS DESCRIBED IN ITEM III OF THIS CONDITION OR WITH STONE RIPRAP AS DESCRIBED IN ITEM IV OF THIS CONDITION.

   STABILIZE THE SLOPE WITH SOD -- THE APPLICANT WILL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE APPLICANT WILL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 33% (3H:1V).

   STABILIZE THE SLOPE WITH WOOD WASTE COMPOST -- THE APPLICANT WILL PLACE A SIX-INCH LAYER OF WOOD WASTE COMPOST ON THE SLOPE BY NOVEMBER 15. PRIOR TO PLACING THE WOOD WASTE COMPOST, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. THE APPLICANT WILL NOT USE WOOD WASTE COMPOST TO STABILIZE SLOPES HAVING GRADES GREATER THAN 50% (2H:1V) OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

   STABILIZE THE SLOPE WITH STONE RIPRAP -- THE APPLICANT WILL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15. THE APPLICANT WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

3. STANDARD FOR THE TIMELY STABILIZATION OF DISTURBED SOILS -- BY SEPTEMBER 15 THE APPLICANT WILL SEED AND MULCH ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15%. IF THE APPLICANT FAILS TO STABILIZE THESE SOILS BY THIS DATE, THEN THE APPLICANT WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.
   STABILIZE THE SOIL WITH TEMPORARY VEGETATION -- BY OCTOBER 1 THE APPLICANT WILL SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. THE APPLICANT WILL MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 15, THEN THE APPLICANT WILL MULCH THE AREA FOR OVER-WINTER PROTECTION AS DESCRIBED IN ITEM III OF THIS STANDARD.
   STABILIZE THE SOIL WITH SOD -- THE APPLICANT WILL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1. PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
   STABILIZE THE SOIL WITH MULCH -- BY NOVEMBER 15 THE APPLICANT WILL MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. PRIOR TO APPLYING THE MULCH, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE DISTURBED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE APPLICANT WILL ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396
STATE OF MAINE
SHAWN M. FRANK
No. 6396
LICENSED
PROFESSIONAL ENGINEER
12-21-2023

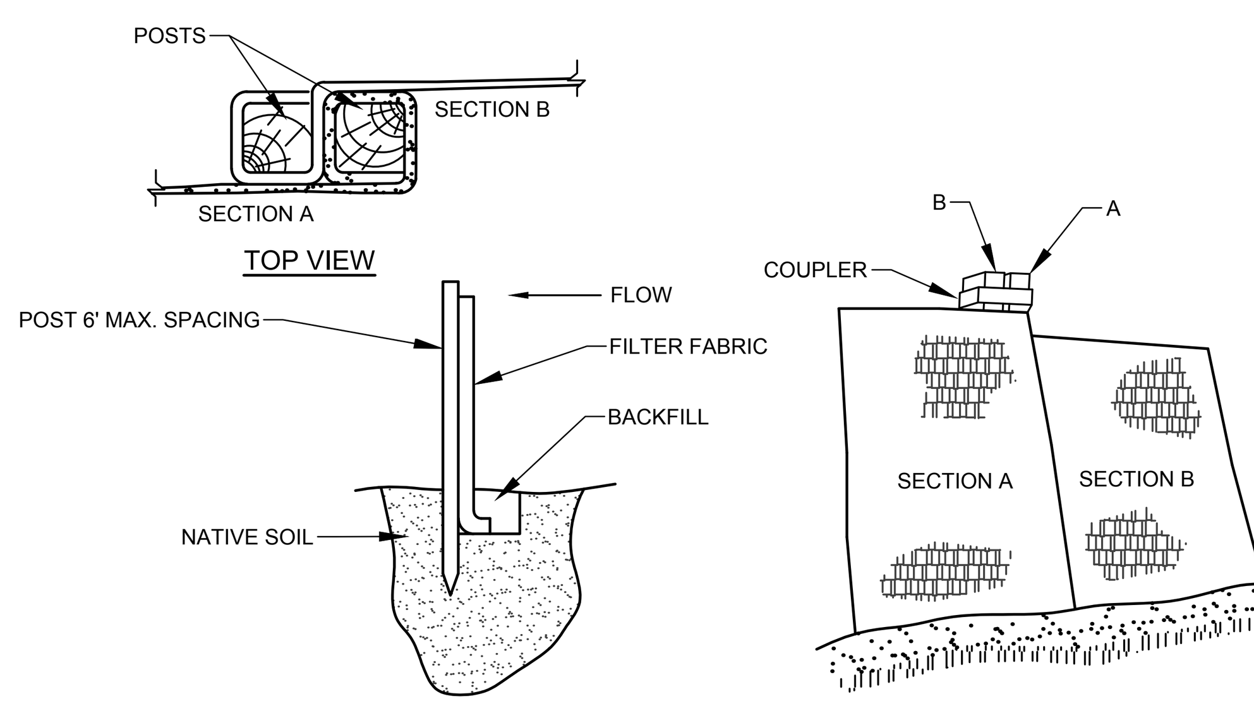
REV:	BY:	DATE:	STATUS:
C	SMF	12-21-2023	SUBMISSION TO DEP FOR STORMWATER LAW
B	SMF	11-13-2023	PRELIMINARY SUBDIVISION COMMENT RESPONSE SUBMISSION
A	SMF	08-21-2023	PRELIMINARY SUBDIVISION PLAN SUBMISSION TO TOWN

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

EROSION CONTROL NOTES
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE
FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

RECORD OWNER:
FREDERICK ROBIE,JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

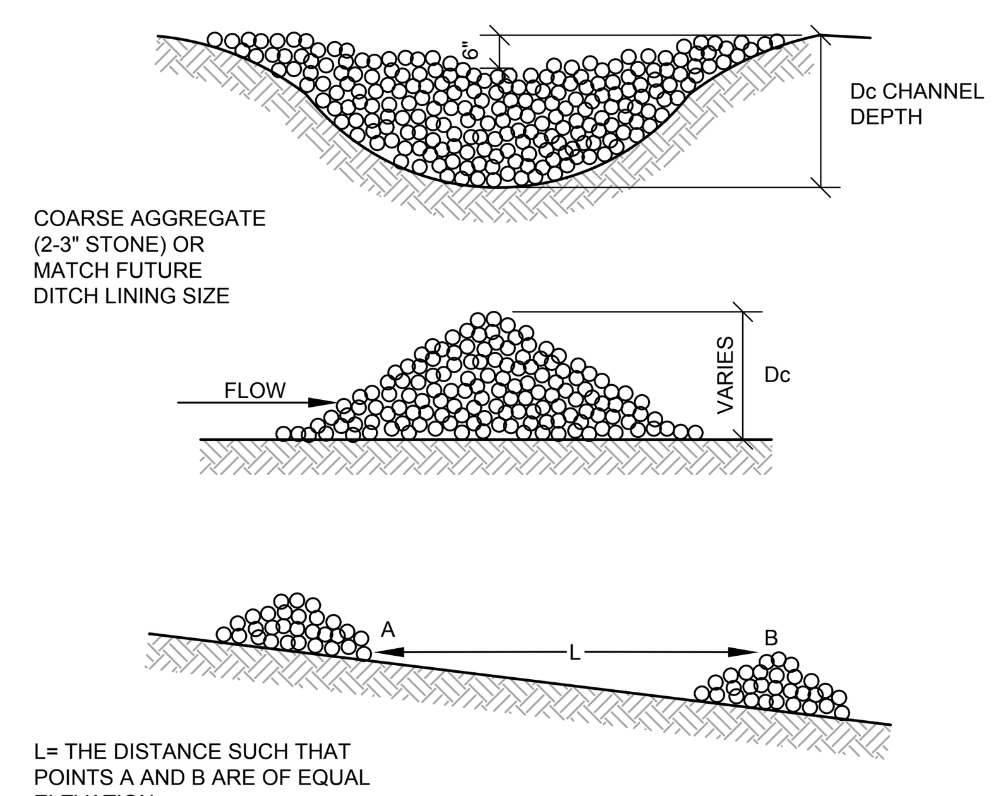
DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	NTS
PROJECT	21483



INSTALLATION:

1. EXCAVATE A 6"x 6" TRENCH ALONG THE LINE OF PLACEMENT FOR THE FILTER BARRIER.
2. UNROLL A SECTION AT A TIME AND POSITION THE POSTS AGAINST THE BACK (DOWNSTREAM) WALL OF THE TRENCH.
3. DRIVE POSTS INTO THE GROUND UNTIL APPROXIMATELY 2" OF FABRIC IS LYING ON THE TRENCH BOTTOM.
4. LAY THE TOE-IN FLAP OF FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH, BACKFILL THE TRENCH AND TAMP THE SOIL. TOE-IN CAN ALSO BE ACCOMPLISHED BY LAYING THE FABRIC FLAP ON UNDISTURBED GROUND AND PILING AND TAMPING FILL AT THE BASE, BUT MUST BE ACCOMPANIED BY AN INTERCEPTION DITCH.
5. JOIN SECTION AS SHOWN ABOVE.
6. BARRIER SHALL BE MIRAFI SILT FENCE OR EQUAL.

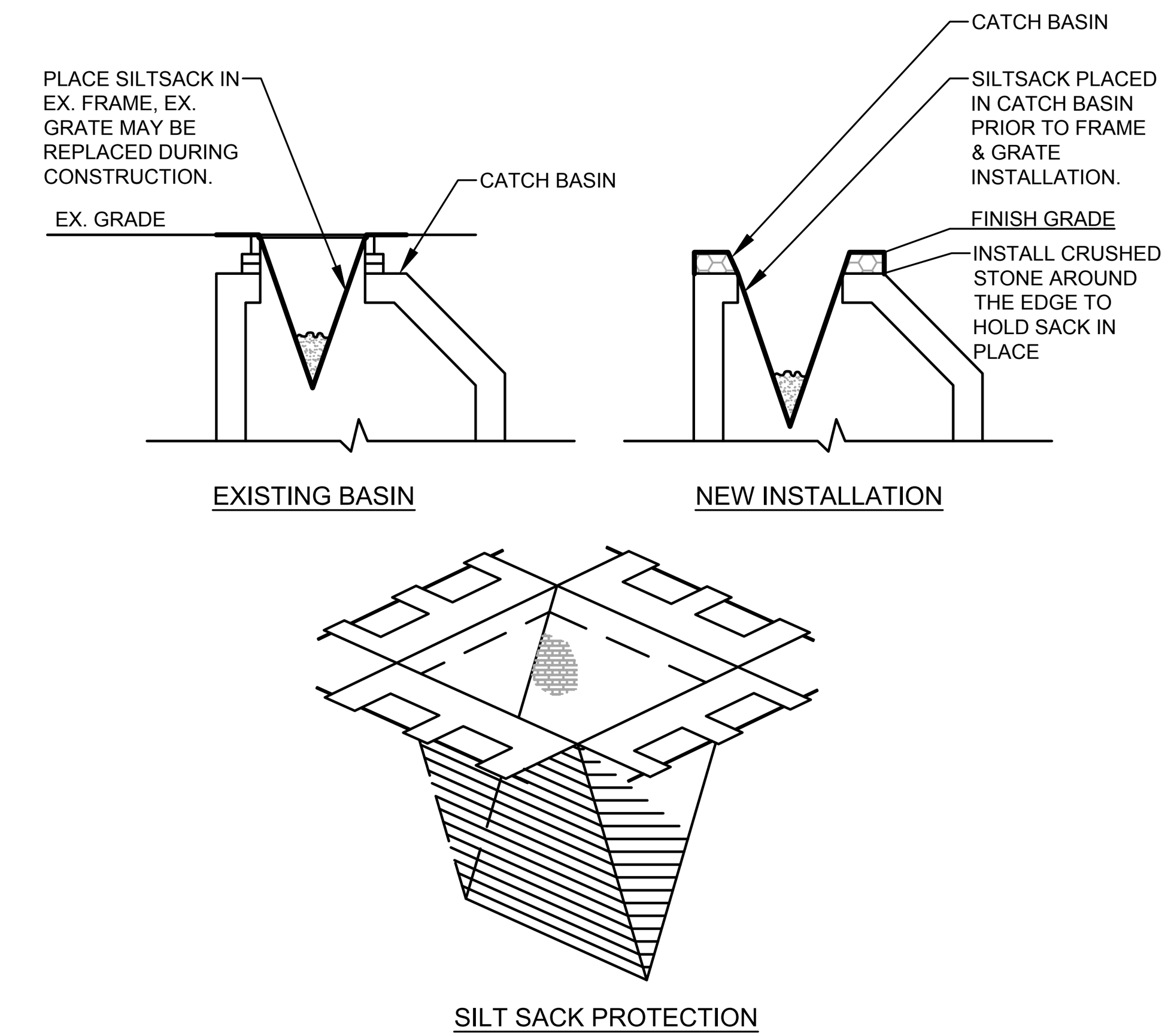
FILTER BARRIER
NOT TO SCALE



NOTES:

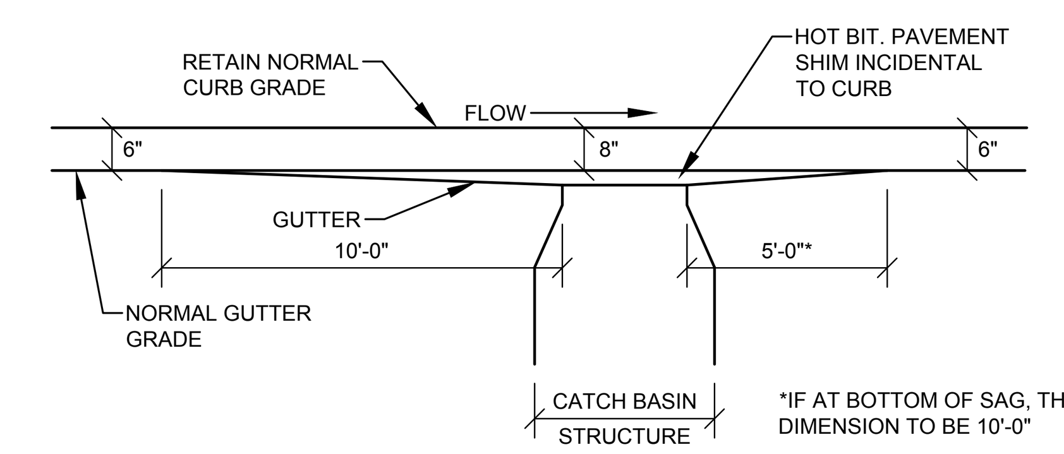
1. CHECK DAMS ARE INTENDED FOR THE SETTLEMENT OF SEDIMENTS AND FLOW VELOCITY REDUCTION. A DITCH LINING THAT IS ADAPTED TO THE SLOPE WILL BE NECESSARY FOR EROSION CONTROL (I.E. ONE ROW OF EROSION CONTROL BLANKET AT A MINIMUM).
2. CHECK DAMS SHOULD BE INSTALLED BEFORE RUNOFF IS DIRECTED TO THE SWALE.
3. THE AREA AROUND EACH CHECK DAM SHOULD BE FREE OF DEBRIS.
4. A STONE CHECK DAM SHOULD BE COMPRISED OF WELL-GRADED CRUSHED ROCK WITH A MAXIMUM SIZE OF 6 INCHES AND A MINIMUM STONE SIZE OF 2 INCHES. LARGER STONES MAY BE USED ON STEEP SLOPES.
5. THE MAXIMUM HEIGHT OF A STONE CHECK DAM SHOULD BE 2 FEET WITH A 6-INCH DEPRESSION AT ITS CENTER FOR OVERFLOW. THE EDGES OF THE DAM SHOULD BE KEYED INTO THE EMBANKMENTS TO PREVENT SIDE EROSION.
6. MECHANICAL PLACEMENT FOLLOWED BY HAND PLACEMENT WILL BE NECESSARY TO ACHIEVE A TIGHT MASS WITHIN THE CHANNEL AND TO ENSURE THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES.
7. ANY EROSION DOWNGRADIENT OR AROUND THE EDGES OF STONE CHECK DAMS SHOULD BE CORRECTED IMMEDIATELY.
8. TEMPORARY CHECK DAMS MAY BE REMOVED WHEN THE SWALE IS STABILIZED WITH WITH VEGETATION (90% COVERAGE).

STONE CHECK DAM
NOT TO SCALE



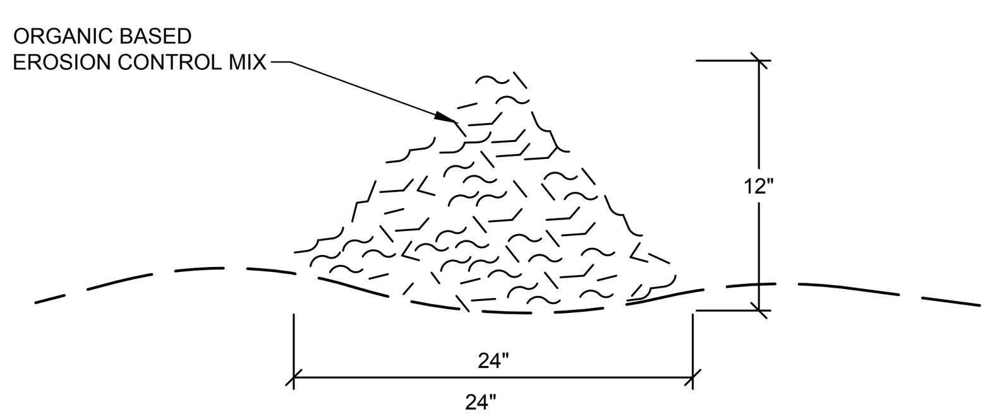
NOTES:
PRIOR TO FINAL GRADING AND PAVING OPERATIONS BEGIN A CATCH BASIN INSERT (SUCH AS A SILT SACK OR A DANDY BAG II) MUST BE INSTALLED IN EACH BASIN PER MANUFACTURES INSTRUCTIONS. HAY BALES SHOULD BE REMOVED ONCE INSERTS ARE INSTALLED.

CATCH BASIN PROTECTION DETAIL
NOT TO SCALE



NOTES:
CATCH BASIN GRATES SHALL BE DEPRESSED 2" BELOW THE NORMAL GUTTER GRADE UNLESS THIS DEPRESSION INTERFERES WITH TRAFFIC. PARALLEL BAR GRATES SHALL BE INSTALLED ON A LEVEL GRADIENT. DIMENSIONS ARE INTENDED TO BE NOMINAL.

GUTTER GRADE TRANSITION AT CATCH BASIN
NOT TO SCALE



COMPOSITION:
EROSION CONTROL MIX SHALL BE MANUFACTURED ON OR OFF THE PROJECT SITE SUCH THAT ITS COMPOSITION IS IN ACCORDANCE WITH THE MDEP MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL, LAST REVISED 3/2003 OR LATER. IT MUST CONSIST PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS. WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS WILL NOT BE ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.

INSTALLATION:

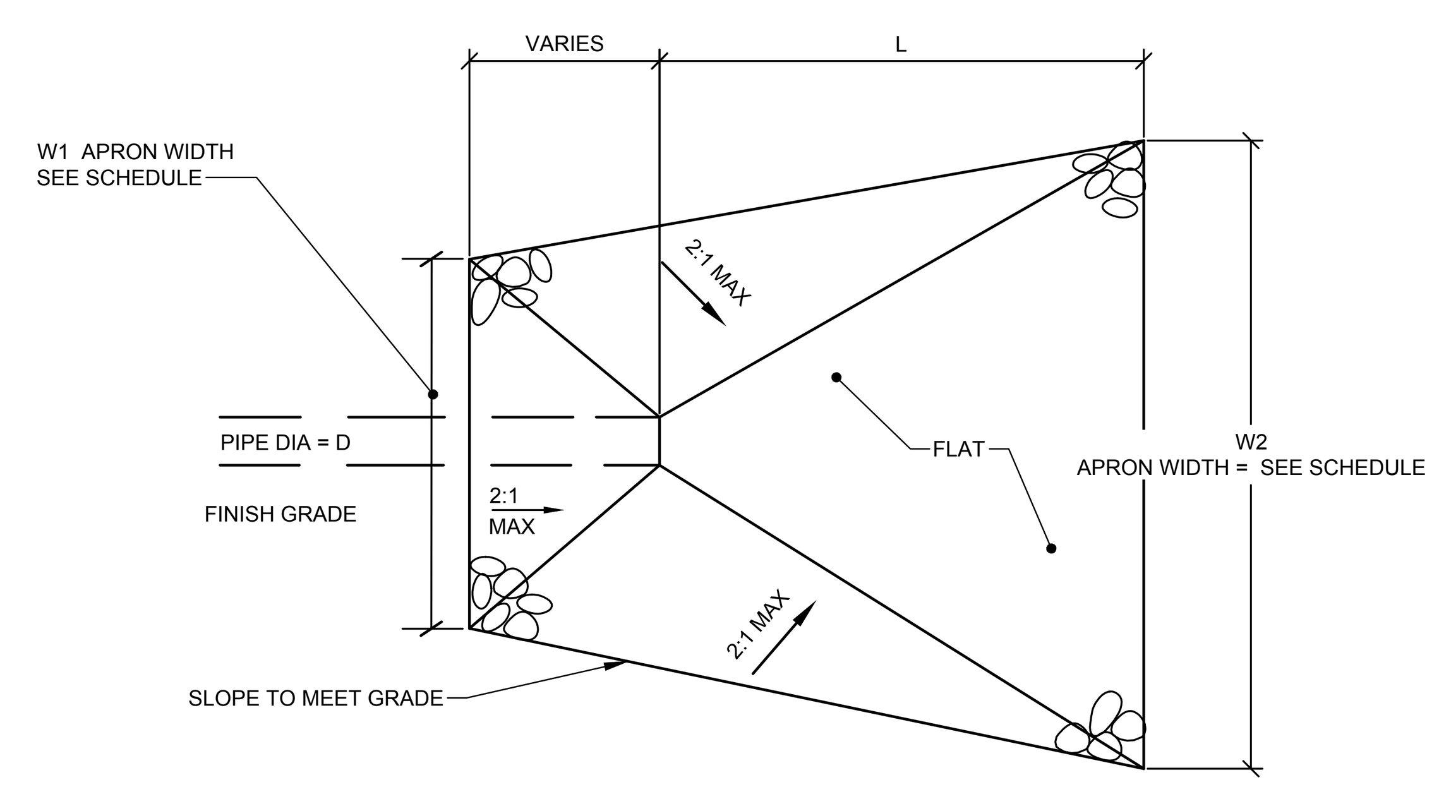
1. THE BARRIER MUST BE PLACED ACROSS THE SLOPE, ALONG THE CONTOUR.

2. EXISTING GROUND SHALL BE PREPARED SUCH THAT THE BARRIER MAY LIE NEARLY FLAT ALONG THE GROUND TO AVOID THE CREATION OF VOIDS AND BRIDGES IN ORDER TO MINIMIZE THE POTENTIAL OF WASH OUTS UNDER THE BARRIER

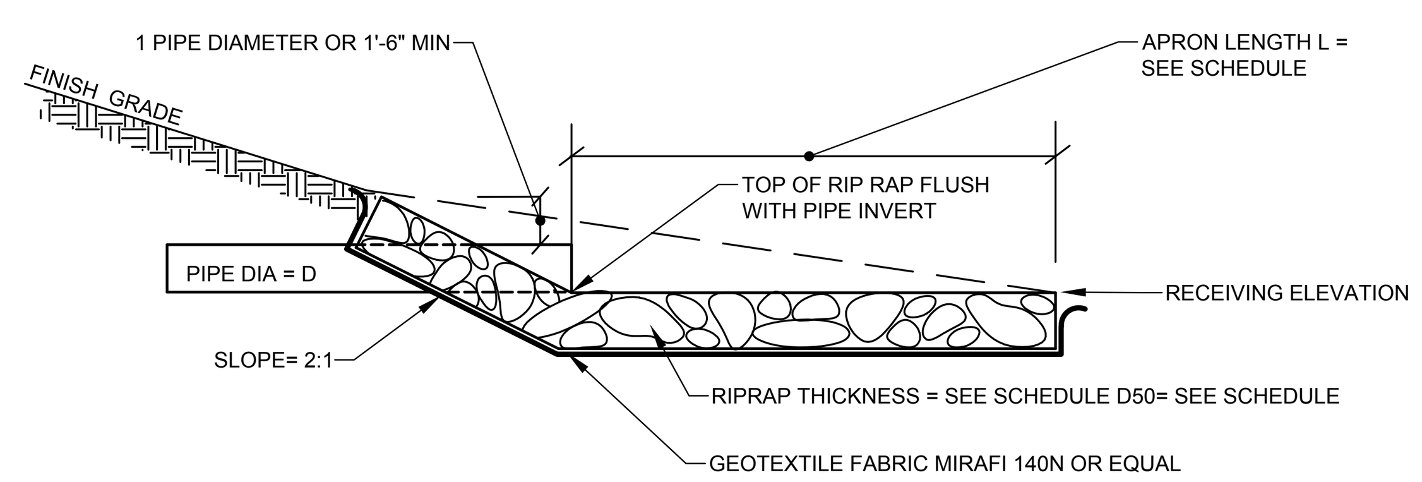
3. THE BARRIER SHALL BE A MINIMUM OF 1 FOOT HIGH (AS MEASURED ON THE UPHILL SIDE) AND 2 FEET WIDE FOR SLOPES LESS THAN 5% IN GRADE AND SHALL BE WIDER TO ACCOMMODATE THE ADDITIONAL RUNOFF.

4. EROSION CONTROL MIX CAN BE INSTALLED WHERE SILT FENCE IS ILLUSTRATED ON THE DESIGN PLANS IN AREAS EXCEPT IN, BUT NOT LIMITED TO, THE FOLLOWING AREAS: WETLAND AREAS, AT POINTS OF CONCENTRATED FLOW, BELOW CULVERT OUTLET APRONS, AROUND CATCH BASINS AND CLOSED STORM SYSTEMS AND AT THE BOTTOM OF STEEP SLOPES THAT ARE MORE THAN 50 FEET FROM TOP TO BOTTOM.

EROSION CONTROL MIX BERM
NOT TO SCALE



PLAN VIEW



SECTION VIEW

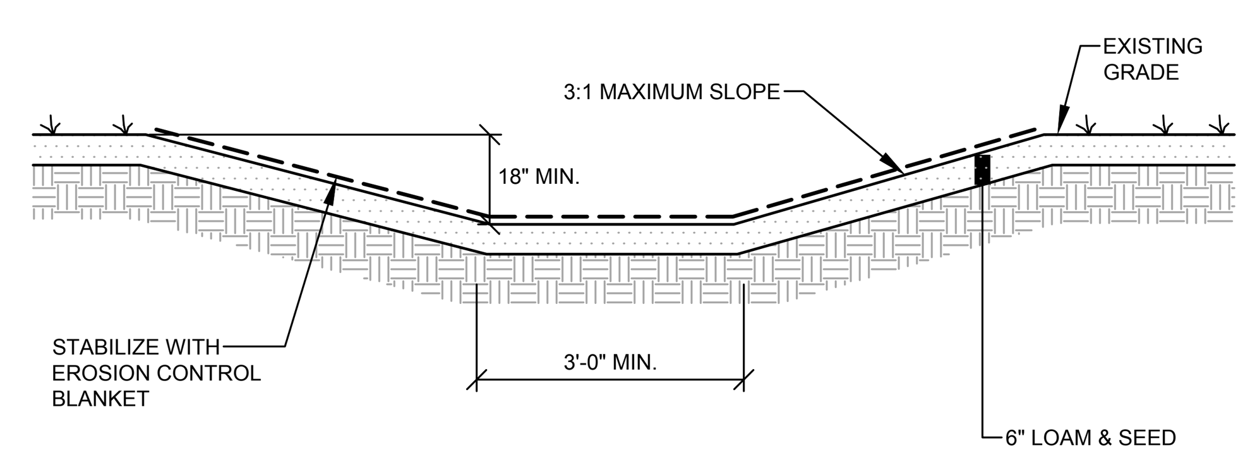
TYPICAL RIPRAP APRON SCHEDULE

CULVERT DIAMETER - D (IN.)	APRON LENGTH - L (FT.)	WIDTH -W1 (FT)	WIDTH -W2 (FT)	RIPRAP D50 (IN.)	RIPRAP THICKNESS (IN.)
12	8	3	9	6	14
15	10	4	12	6	14
18	13	5	15	7	16
24	18	6	20	8	18
36	29	9	32	11	25
42	33	11	37	12	27
48	39	12	43	16	36

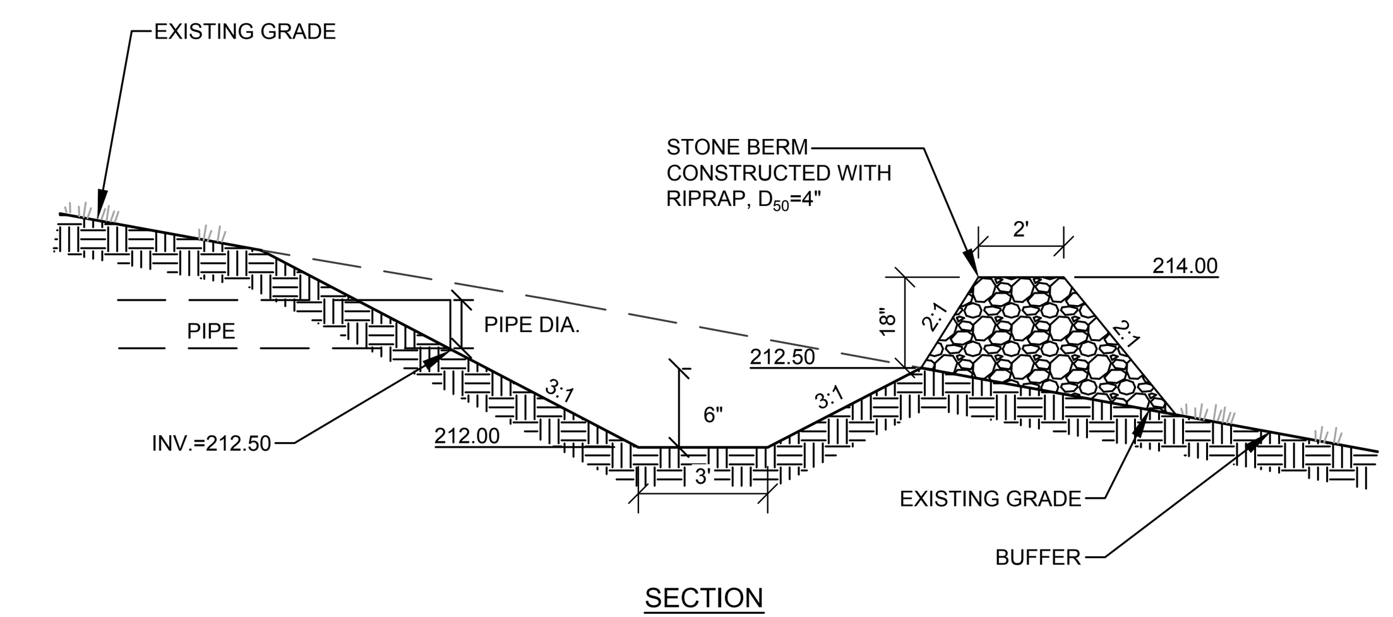
NOTES:

1. RIPRAP TO BE PROCESSED ANGULAR ROCK.
2. RIPRAP GRADIATION SHALL BE A WELL GRADED MIX FROM ABOUT 1.5 TIMES D SIZE TO 25 PERCENT OF THE D SIZE.
3. THE RIPRAP STONES SHALL BE CAREFULLY PLACED FROM THE TOE OF THE SLOPE UPWARD.
4. STONES SHALL BE LOWERED TO THE SLOPE AND NOT BE ALLOWED TO DROP MORE THAN 12" ONTO THE GEOTEXTILE.
5. THE FINISHED SURFACE SHALL BE A RELATIVELY SMOOTH, UNIFORMLY SLOPED SURFACE.

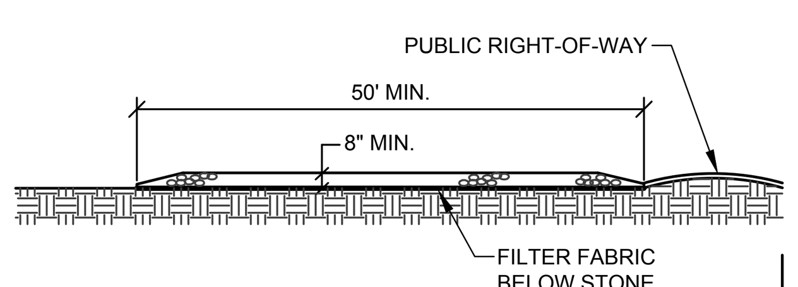
RIPRAP APRON
NOT TO SCALE

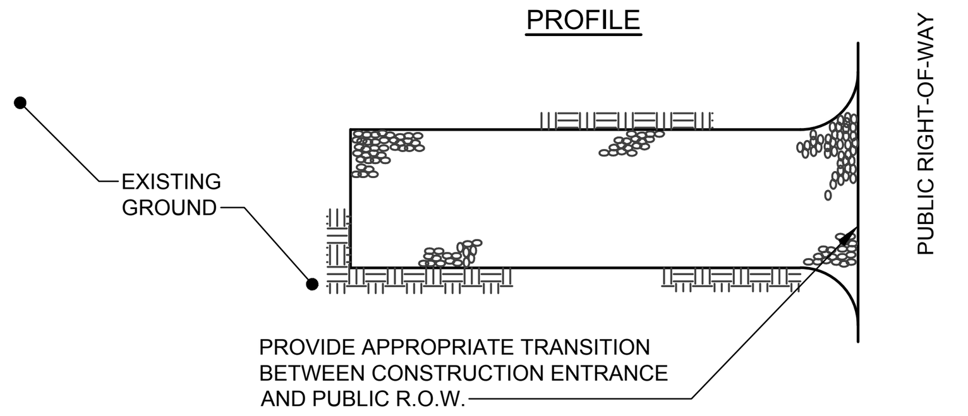


GRASSED SWALE
NOT TO SCALE



STONE BERM LEVEL SPREADER
NOT TO SCALE



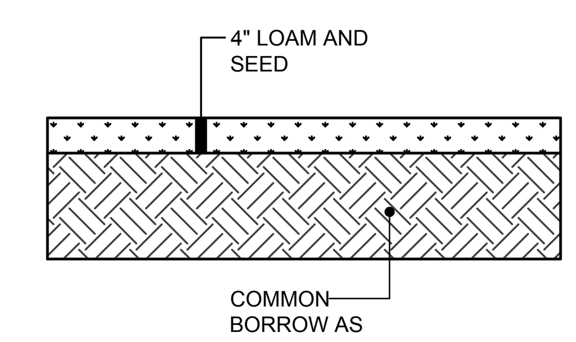


PLAN

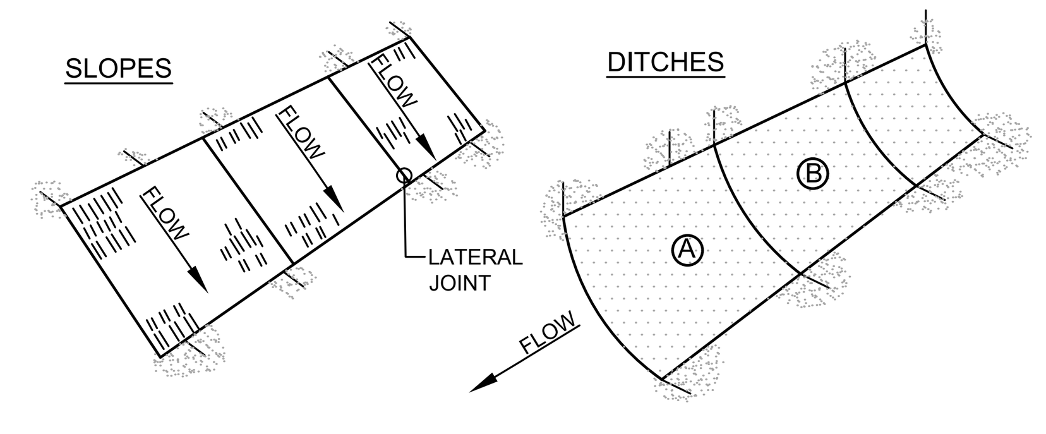
NOTES:

1. STONE SIZE- AASHTO DESIGNATION M43, SIZE NO. 2 (2 1/2" TO 1 1/2"). USE CRUSHED STONE.
2. LENGTH- AS SHOWN ON PLANS, MIN. 50 FEET.
3. THICKNESS- NOT LESS THAN EIGHT (8) INCHES.
4. WIDTH- NOT LESS THAN FULL WIDTH OF ALL POINT OF INGRESS OR EGRESS.
5. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE



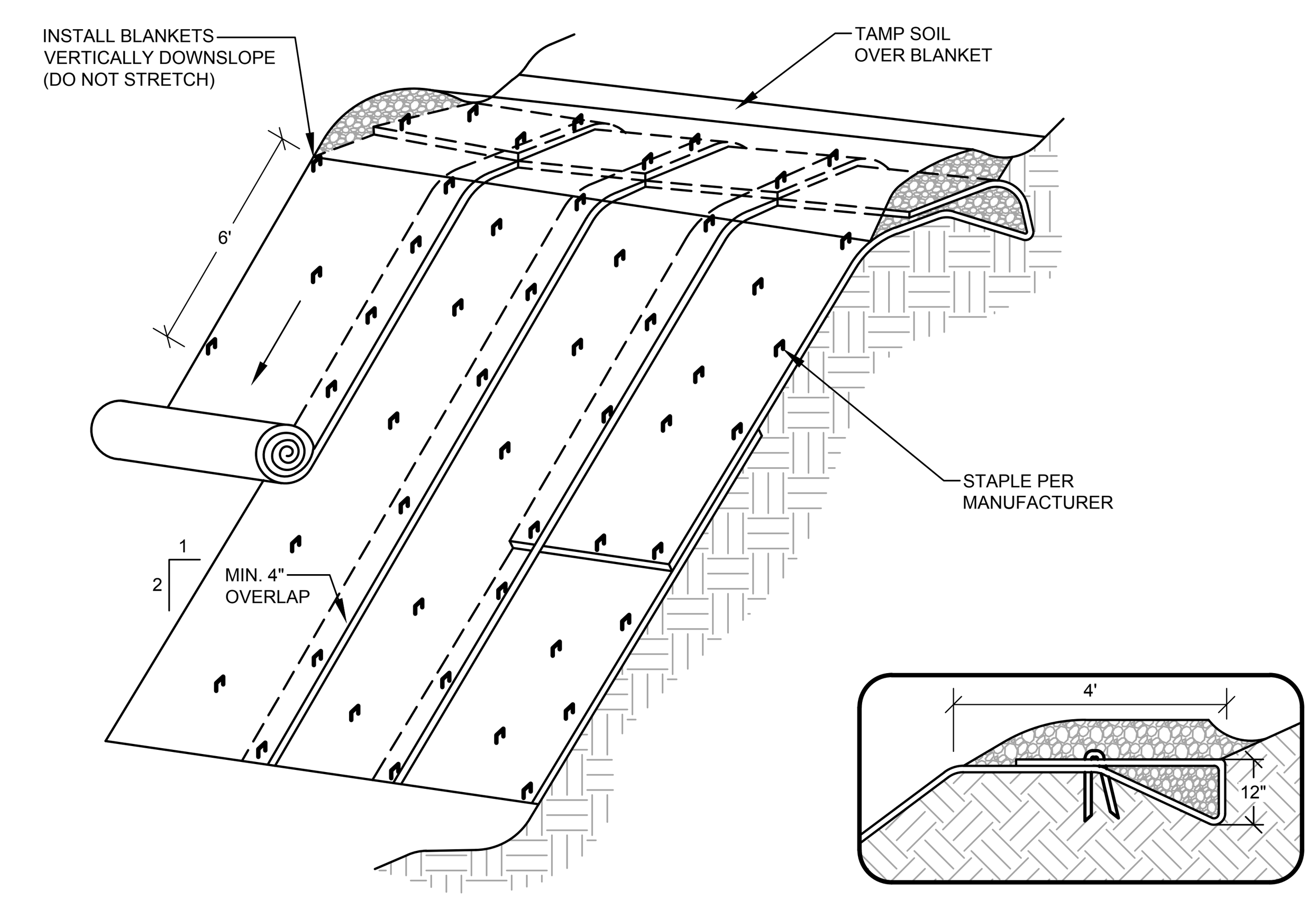
LOAM & SEED SECTION
NOT TO SCALE



NOTES:

1. BURY THE TOP END OF THE MESH MATERIAL IN A 6" TRENCH AND BACKFILL AND TAMP TRENCHING SECURE END WITH STAPLES AT 6" SPACING, 4" DOWN FROM EXPOSED END.
2. FLOW DIRECTION JOINTS TO HAVE UPPER END OF LOWER STRIP BURIED WITH UPPER LAYERS OVERLAPPED 4" AND STAPLED. OVERLAP B OVER A.
3. LATERAL JOINTS TO HAVE 4" OVERLAP OF STRIPS. STAPLE 18" ON CENTER.
4. STAPLE OUTSIDE LATERAL EDGE 2" ON CENTER.
5. WIRE STAPLES TO BE MIN OF #11 WIRE 6" LONG AND 1-1/2" WIDE.
6. USE NORTH AMERICAN GREEN DS 150 OR APPROVED EQUAL.

EROSION CONTROL BLANKET
NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

1. THE SOIL SURFACE SHOULD BE FINELY GRADED AND SMOOTH FOR THE BLANKET TO HAVE DIRECT CONTACT WITH THE SOIL AND TO PREVENT UNDERMINING. EROSION CONTROL BLANKETS PERFORM BEST ON LOAMY SOILS AND SHOULD NOT BE USED ON ROCKY SITES OR SHALLOW SOILS.

ON CONTROL BLANKET.
ETCHING AND ANCHOR THE UPSLOPE EDGE IN A 12 INCH DEEP TRENCH THAT IS BACKFILLED AND TAMPED.
E TOP OF EACH ROW AND 4 INCHES AT THE
AP WITH A MAXIMUM SPACING OF 3 FEET OR AS REQUIRED BY THE MANUFACTURER.

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396

STATE OF MAINE
SHAWN M. FRANK
No. 6396
LICENSED
PROFESSIONAL ENGINEER
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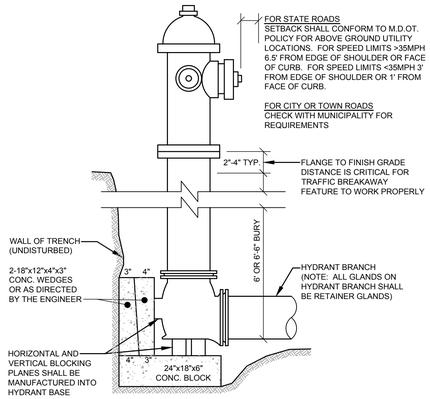
REV:	BY:	DATE:	STATUS:
C	SMF	12-21-2023	SUBMISSION TO DEP FOR STORMWATER LAW
B	SMF	11-13-2023	PRELIMINARY SUBDIVISION COMMENT RESPONSE SUBMISSION
A	SMF	08-21-2023	PRELIMINARY SUBDIVISION PLAN SUBMISSION TO TOWN

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

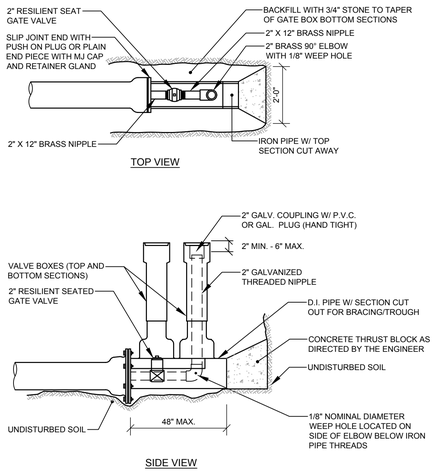
EROSION CONTROL DETAILS
OF:
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE
FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

RECORD OWNER:
FREDERICK ROBIE,JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

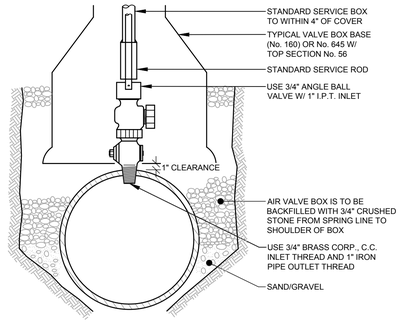
DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	NTS
PROJECT	21483



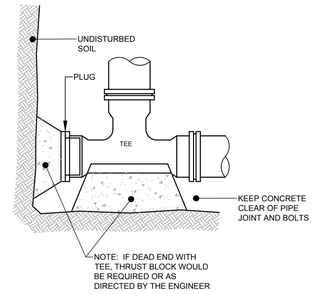
HYDRANT INSTALLATION
NOT TO SCALE



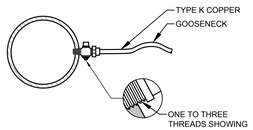
STANDARD 2" BLOW-OFF
NOT TO SCALE



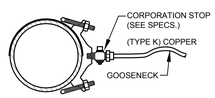
AIR VALVE (1")
NOT TO SCALE



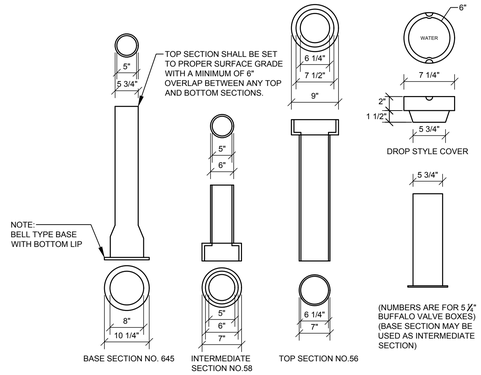
STANDARD TEE BLOCKING
NOT TO SCALE



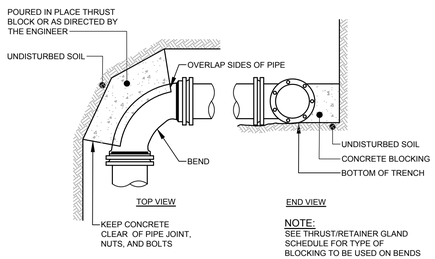
SERVICE TAP
(3/4" AND 1" C.C. THREAD)



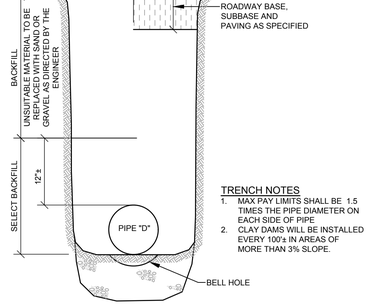
SERVICE SADDLE
(1-1/2" AND 2" C.C. THREAD)



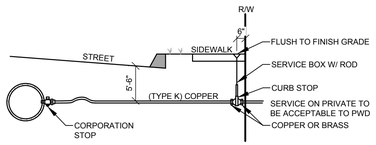
VALVE BOX & COVER
NOT TO SCALE



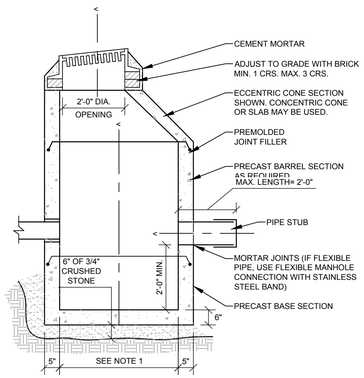
STANDARD BEND BLOCKING
NOT TO SCALE



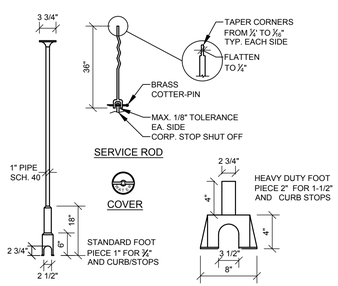
SECTION THRU EARTH TRENCH
NOT TO SCALE



SERVICE CONNECTION
NOT TO SCALE

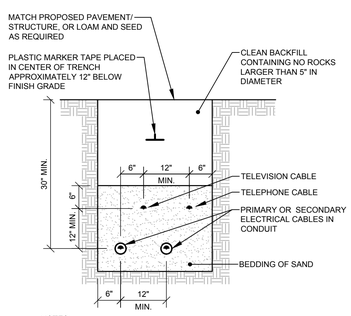


NOTES:
1. 4'-0" I.D. TYPICAL. SOME STRUCTURES MAY REQUIRE LARGER I.D. PROVIDE SHOP DRAWINGS.
2. DRAINAGE STRUCTURES TO BE DESIGNED FOR H-20 LOADING.
3. PIPE SIZES AND INVERTS AS NOTED ON PLANS.
4. CATCH BASIN FRAME AND GRATE TO BE EJ 5520M5 OR APPROVED EQUAL.
5. DRAINAGE MANHOLE FRAME AND COVER TO BE NEENAH FOUNDRY R-1792-FL OR APPROVED EQUAL. COVER SHALL BE MARKED "DRAIN".



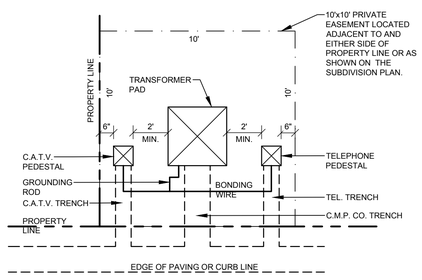
NOTE:
ANY EXTENSION OF SERVICE BOX REQUIRES:
1. 1" FEMALE IRON PIPE COUPLING.
2. 1" THREADED PIPE (THIS IS TO BE A NON-WELDED, TWO PIECE ARRANGEMENT. SLIP ON ADAPTERS ARE NOT PERMISSIBLE.)

TYPICAL WATER SERVICE
NOT TO SCALE



NOTES:
CABLES TO BE ENCASED IN SCHEDULE 40 PVC CONDUIT.

UNDERGROUND CABLE INSTALLATION
NOT TO SCALE



NOTE:
TRANSFORMER PAD AND COVER TO BE FIBERGLASS MEETING CENTRAL MAINE POWER SPECIFICATIONS.

TRANSFORMER DETAIL
NOT TO SCALE

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396

STATE OF MAINE * SHAWN M. FRANK No. 6396 * PROFESSIONAL ENGINEER
12-21-2023

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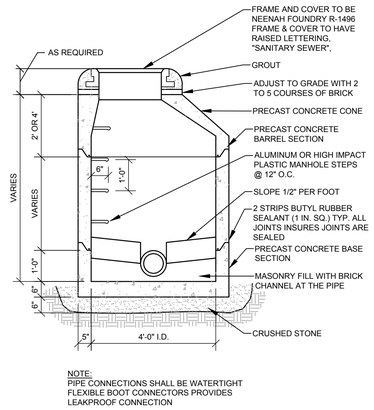
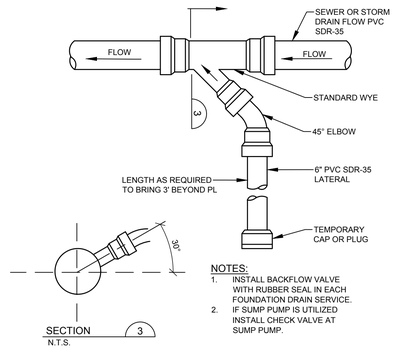
SHEET25 OF29



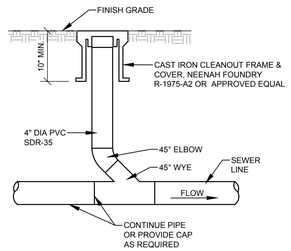
NOTE:
PIPE CONNECTIONS SHALL BE WATERTIGHT FLEXIBLE BOOT CONNECTORS PROVIDES LEAKPROOF CONNECTION

PRECAST MANHOLE
NOT TO SCALE

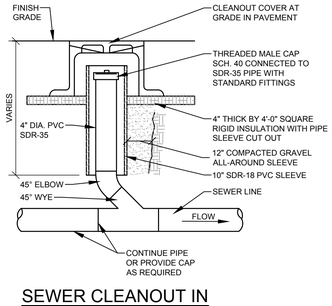


NOTES:
1. INSTALL BACKFLOW VALVE WITH RUBBER SEAL IN EACH FOUNDATION DRAIN SERVICE.
2. IF SUMP PUMP IS UTILIZED INSTALL CHECK VALVE AT SUMP PUMP.

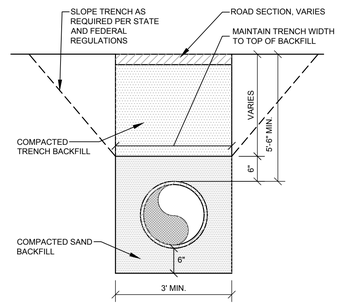
SEWER / FOUNDATION DRAIN SERVICE CONNECTION
NOT TO SCALE



SEWER CLEANOUT
NOT TO SCALE

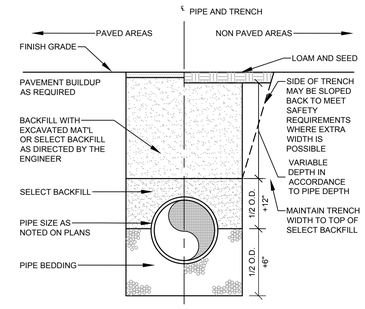


SEWER CLEANOUT IN PAVEMENT AREAS
NOT TO SCALE



NOTES:
1. PLACE TRENCH BACKFILL MATERIAL IN 12" LIFTS.
2. COMPACT EACH LIFT TO 92% OF MAXIMUM.

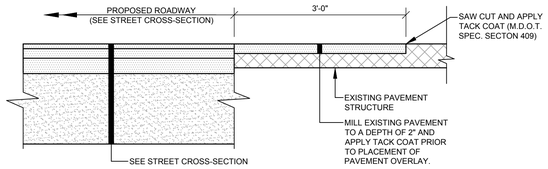
PRESSURE SEWER TRENCH
NOT TO SCALE



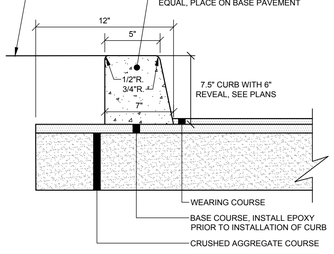
TRENCH BACKFILL SCHEDULE		
PIPE TYPE	PIPE BEDDING MATERIAL	SELECT BACKFILL
CORRUGATED METAL DUCTILE IRON REINFORCED CONCRETE	MDOT 703.22 TYPE B UD BACKFILL	MDOT 703.22 TYPE B UD BACKFILL
PVC-SDR 35 HDPE	MDOT 703.13 3/4" CRUSHED STONE	MDOT 703.22 TYPE B UD BACKFILL, OR MDOT 703.13 3/4" CRUSHED STONE
PERFORATED PVC-SDR 35 HDPE	MDOT 703.13 3/4" CRUSHED STONE	MDOT 703.22 TYPE B UD BACKFILL, OR MDOT 703.13 3/4" CRUSHED STONE

NOTE:
ALL BRACING AND SHEETING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL MEET ALL STATE AND O.S.H.A. SAFETY STANDARDS.

TRENCH SECTION
NOT TO SCALE

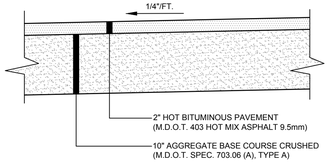


PAVEMENT JOINT
NOT TO SCALE

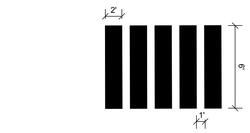


NOTES:
1. SEE TYPICAL ACCESS DRIVE SECTION FOR ROADWAY MATERIAL SPECIFICATIONS AND DEPTHS.
2. 6" TIPDOWNS SHALL BE PROVIDED AS SHOWN ON PLANS.

SLIPFORM CURB SECTION
NOT TO SCALE

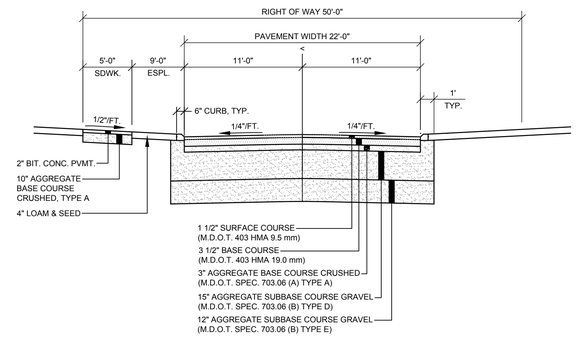


BITUMINOUS SIDEWALK
NOT TO SCALE

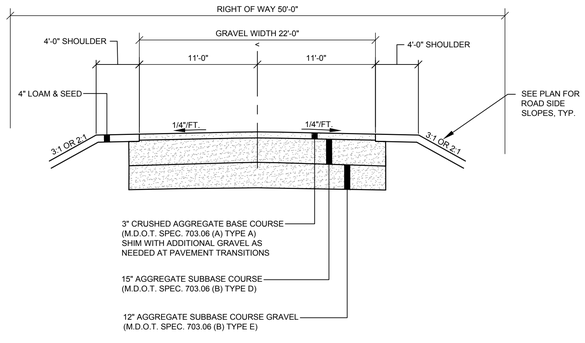


PAVEMENT MARKING NOTES
1. ALL PAVEMENT MARKINGS SHALL BE IN CONFORMANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, U.S. DOT, FHWA, LATEST EDITION.
2. ALL PAVEMENT MARKING LINES SHALL BE PAINT AND 4" WIDE, EXCEPT FOR:
   SWSL-12"
   SYCL-12"
   CROSSWALK BARS - 24"
3. PAVEMENT WORD AND SYMBOL MARKINGS SHALL BE WHITE PAINT.
4. SOLID WHITE STOP LINE SHALL BE A MINIMUM OF 4' BEHIND THE EDGE OF CROSSWALK.

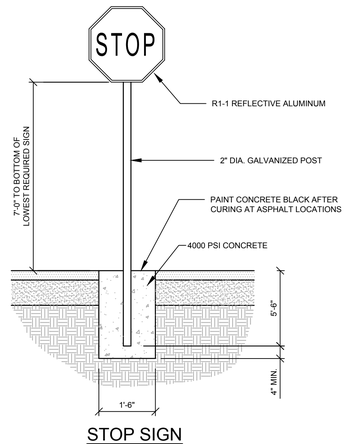
CROSSWALK DETAIL
NOT TO SCALE



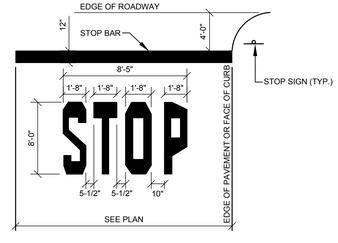
URBAN SUB COLLECTOR STREET CROSS-SECTION (22 FEET WIDTH)
NOT TO SCALE



GRAVEL ROAD SECTION
NOT TO SCALE



STOP SIGN
NOT TO SCALE



NOTE:
1. WORDS AND ARROWS FOR DRIVEWAYS SHALL BE APPLIED ACCORDING TO REQUIREMENTS AS OUTLINED IN SECTION 3B OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
2. THESE WORDS AND BAR ARE TO BE PAINTED REFLECTIVE WHITE.

STOP BAR
NOT TO SCALE

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396

STATE OF MAINE * SHAWN M. FRANK No. 6396 * PROFESSIONAL ENGINEER
12-21-2023

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THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AS INDICATED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

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NOTES

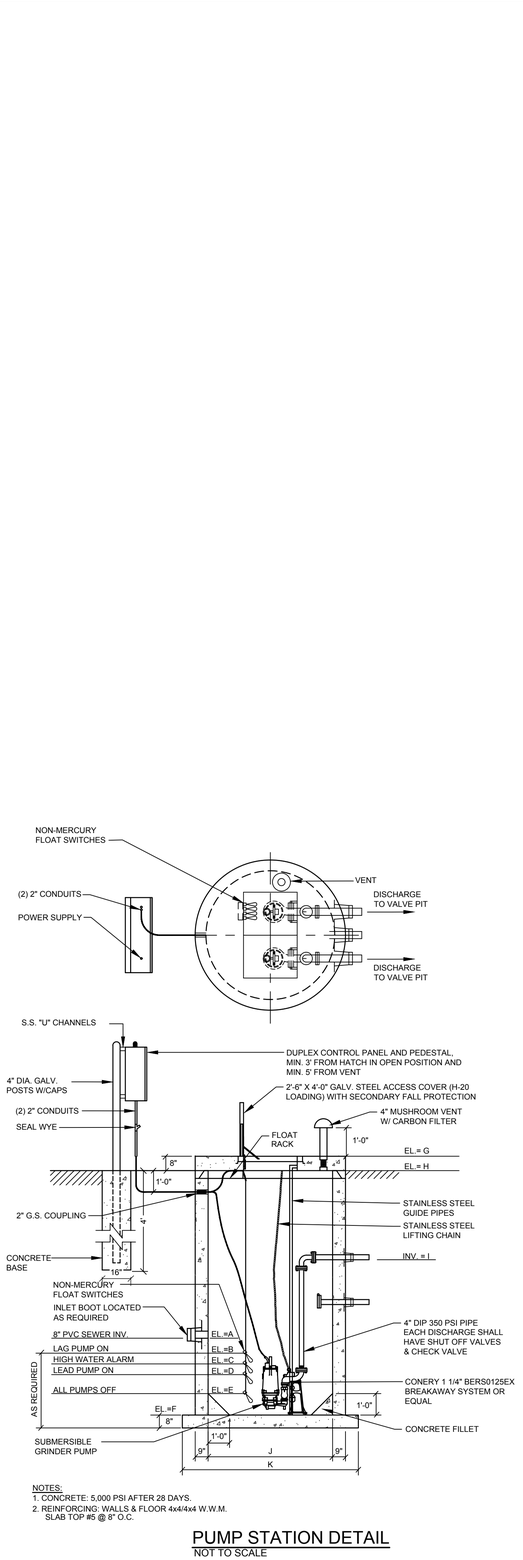
1. LIFT STATION SHALL BE DUPLEX LIFT STATION PANEL AND CONTROLS FOR THE OPERATIONS OF 2.0 HOMA CUTTER PUMPS OPERATING AT APPROXIMATELY THE DUTY POINT LISTED IN THE TABLE BELOW. THE PUMPS ARE MODEL AMS444-285ASC 1 PHASE, 60 HZ, 230 VOLT/460V, 1750 RPM AND 84 FLA/42 FLA WITH THE INSTALLED IMPELLER.
2. PUMPS SHALL HAVE BREAK AWAY FITTINGS. BREAK AWAY FITTINGS SHALL BE NON-SPARKING.
3. ALL UNDERGROUND ELECTRIC POWER LINES SHALL BE INSTALLED IN PVC CONDUIT. ABOVE GROUND SERVICES SHALL BE INSTALLED IN SCHEDULE 40 GALVANIZED CONDUIT. SIZES AS REQUIRED BY ELECTRIC COMPANY. ALL ELECTRICAL WIRING SHALL MEET ALL LOCAL AND NEC ELECTRICAL CODE REQUIREMENTS.
4. THE PANEL SHALL BE EQUIPPED WITH AN INNER DOOR THAT HAS ELAPSED TIMED METERS, WARNING LIGHTS FOR TEMPERATURE AND MOISTURE SENSORS, CONTROL SWITCHES FOR THE INDIVIDUAL PUMPS (AUTO, OFF AND RUN) AND A CONTROL SWITCH FOR THE ALARM WITH TEST AND SILENCE.
5. THE MAIN BREAKERS (CONTROL AND PUMPS) AND FUSES FOR BOTH THE ALARM AND CONTROLS SHALL BE ACCESSIBLE WITHOUT OPENING THE INNER DOOR.
6. THE PANEL SHALL HAVE BOTH AMBER VISIBLE ALARM LIGHT AND AN AUDIBLE PIEZO 80DB ALARM. THE ENCLOSURE SHALL BE A FIBERGLASS NEMA 4X RATED, UL698A COMPLIANT LISTED ENCLOSURE RATED FOR THE PUMPS WITH A WIRING SCHEMATIC PROVIDED ON THE INNER FACE OF THE PANEL DOOR. THE DOOR SHALL HAVE A WEATHER SEAL AND LOCKABLE LATCHES.
7. THE PANEL SHALL HAVE THE REQUIRED CIRCUITRY, CONTROLLERS, CIRCUIT BREAKERS, DELAYS, MOTOR STARTERS, RELAYS, TERMINAL BLOCK AND GROUNDING REQUIRED TO OPERATE THE PUMPS IN A AN ALTERNATING SEQUENCE. PANEL, CONTROLS AND ELECTRICAL COMPONENTS SHALL BE EXPLOSION PROOF.
8. THE PANEL SHALL BE MANUFACTURED BY SJE RHOMBUS, PRIMEX CONTROLS, CSI OR APPROVED EQUIVALENT.
9. THE PUMPS, CONTROLS, FLOATS AND FLOAT RACK SHALL BE SUPPLIED BY ONE DISTRIBUTOR OR MANUFACTURER. FLOAT SWITCHES SHALL BE INSTALLED WITH KWIK FLOAT SWITCH CONNECTION SYSTEM. DISTRIBUTOR OR MANUFACTURER SUPPLYING EQUIPMENT SHALL CONFIRM ALL EQUIPMENT MEETS THE INTENT OF THIS SPECIFICATION, AND THAT ALL EQUIPMENT SUPPLIED IS COMPATIBLE FOR THIS SPECIFIC APPLICATION. ALL EQUIPMENT SUPPLIED REQUIRING FACTORY START-UP TO OBTAIN WARRANTY SHALL BE INCLUDED AND PERFORMED BY FACTORY AUTHORIZED PERSONNEL. ANY DEFICIENCIES SHALL BE ADDRESSED PRIOR TO FINAL ACCEPTANCE.
10. PUMP POWER/CONTROL CABLES AND FLOAT CABLES SHALL BE ROUTED TO THE WET WELL IN SEPARATE CONDUITS WITH THE PROPER EXPANSION JOINTS, SEAL OFFS, AND EXPANSION JOINTS. PUMP AND FLOAT CABLES SHALL BE WIRED FORM WET WELL DIRECTLY TO PANEL WITH NO INTERMEDIATE JUNCTION BOXES. WIRE SIZING AND CONDUITS FEEDING AND LEAVING THE CONTROL PANEL SHALL BE PROPERLY SIZED, SHALL SUPPORT THE LOAD OF TWO PUMPS OPERATING AND MEET ALL APPLICABLE LOCAL, STATE AND NEC ELECTRICAL CODES.
11. PUMPS SHALL BE PROVIDED WITH TEMPERATURE AND MOISTURE SENSORS MATCHED TO THE PUMPS.
12. FLOAT CONTROLS SHALL BE NON-MERCURY MECHANICAL FLOATS.
13. CONCRETE: 5,000 PSI AFTER 28 DAYS. REINFORCING STEEL MIN. YIELD STRESS OF 40,000 PSI.
14. REINFORCING: WALLS & FLOOR 4X4/4X4 W.W.M. SLAB TOP #5 @ 8" O.C.
15. THE ACCESS HATCH SHALL BE MANUFACTURED BY THE BILCO COMPANY OR EQUIVALENT AND BE RATED FOR H-20 LOADING. HATCH SHALL OPEN TOWARDS PUMP STATION PANEL AND HAVE INTEGRAL SECONDARY FALL PROTECTION
16. ALL LIFT STATION PIPING SHALL BE DIP 350 PSI.
17. COAT EXTERIOR OF STRUCTURES WITH KOPPERS BITUMASTIC 3000 M OR EQUAL.
18. WET WELL SHALL BE INSTALLED ON A MINIMUM 12" BED OF SCREENED GRAVEL.
19. CONTRACTOR TO CONFIRM OPERATING ELEVATIONS WITH ENGINEER BEFORE ORDERING STATION.
20. CONTRACTOR TO SUBMIT SPECIFICATIONS FOR PUMPS, CONTROL PANELS, AND ALARM FOR OWNER AND ENGINEERS APPROVAL.
21. ELECTRIC SERVICES SHALL BE VERIFIED BY CONTRACTOR AND COORDINATED WITH OWNER, ELECTRIC COMPANY AND PUMP STATION MANUFACTURER PRIOR TO INSTALLATION. CONTRACTOR SHALL PROVIDE AND INSTALL ALL ELECTRICAL COMPONENTS REQUIRED FOR PUMP STATION MEETING APPLICABLE STATE, FEDERAL AND LOCAL CODES.
22. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL MEET ON-SITE WITH OWNER AND ENGINEER TO REVIEW LOCATION OF PUMP STATION AND VALVE PIT. DEPENDING ON PHYSICAL SITE FEATURES, THE ENGINEER RESERVES THE RIGHT TO MODIFY LOCATION.
23. UPON INSTALLATION OF PUMP STATION, CONTRACTOR SHALL PROVIDE OWNER WITH THE FOLLOWING:
    a. OPERATION AND MAINTENANCE MANUALS.
    b. ONE-YEAR WARRANTY ON ALL STRUCTURES, PUMP STATION MECHANICS AND ELECTRIC COMPONENTS, ALL PIPING AND CONNECTIONS.
    c. STARTUP REPORT THAT INCLUDES DRAW DOWN TESTS TO DETERMINE THE OPERATING POINTS FOR BOTH PUMPS.

PUMP PARAMETERS

STATION	I
PUMP	HOMA
MODEL	AMS444-285ASC
IMPELLER	SINGLE CHANNEL
FLOW (GPM)	610
TDH (FT)	99.7
VOLTAGE	230 / 460
HP	34.5
PHASE	1Ø
HERTZ	60
RPM	1750

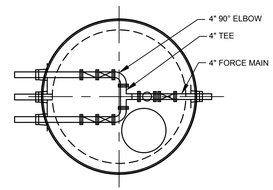
PUMP STATION SCHEDULE

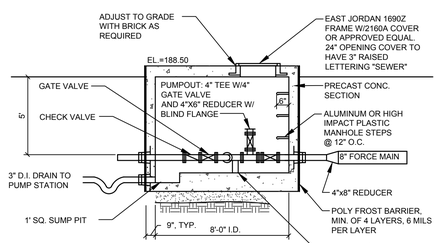
PUMP STATION	MEASUREMENT (FT.)										
	A	B	C	D	E	F	G	H	I	J	K
I	177.00	176.50	176.00	175.50	171.33	169.83	188.50	187.83	180.93	8.0'	10.5'



NOTES:
1. CONCRETE: 5,000 PSI AFTER 28 DAYS.
2. REINFORCING: WALLS & FLOOR 4x4/4x4 W.W.M. SLAB TOP #5 @ 8" O.C.

PUMP STATION DETAIL
NOT TO SCALE





VALVE PIT
NOT TO SCALE

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396

STATE OF MAINE * SHAWN M. FRANK No. 6396 * PROFESSIONAL ENGINEER * 12-21-2023

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PUMP STATION DETAILS
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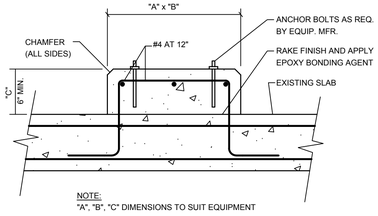
ROBIE STREET SUBDIVISION
ROBIE STREET
GORHAM, MAINE
FOR:
KV ENTERPRISES, LLC
91 AUBURN STREET, SUITE 1030
PORTLAND, MAINE

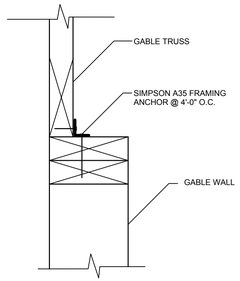
RECORD OWNER:
FREDERICK ROBIE, JR.
C/O BRUCE ROBIE
32 BEECHNUT LANE
HOLDEN, ME

DESIGNED	JBP
DRAWN	STI
CHECKED	SMF
DATE	05/31/2022
SCALE	NTS
PROJECT	21483

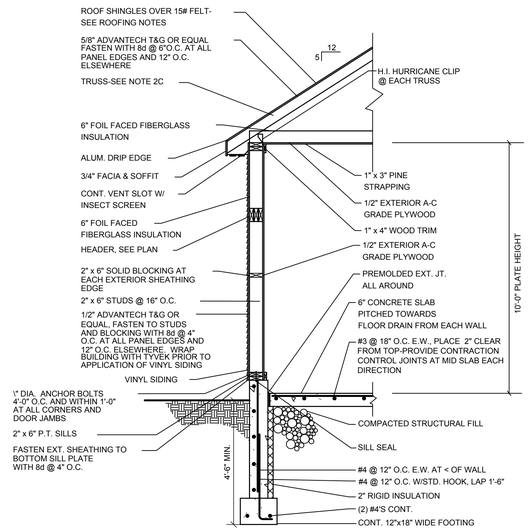
SHEET27 OF29



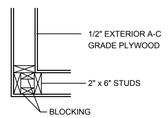
GENERATOR PAD DETAIL
NOT TO SCALE



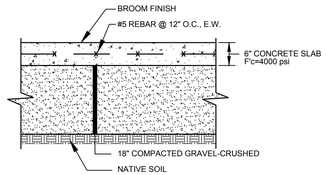
TYPICAL GABLE WALL DETAIL
NOT TO SCALE



TYPICAL WALL SECTION
NOT TO SCALE



TYPICAL CORNER DETAIL
N.T.S.



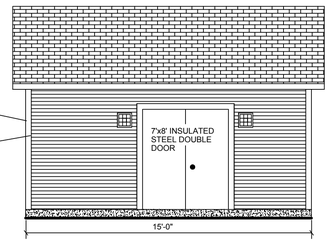
NOTE:
1. PROVIDE CONTRACTION CONTROL JOINTS EVERY 6' IN EACH DIRECTION

TYPICAL CONCRETE SLAB
NOT TO SCALE

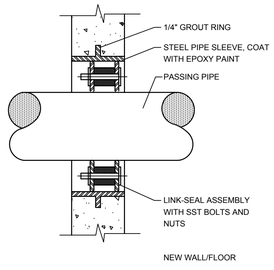
GENERAL NOTES:

1. BUILDING DESIGN TO MEET ALL LOCAL AND STATE IBC (INTERNATIONAL BUILDING CODE) BUILDING CODES.
2. WOOD FRAMING:
   A. ALL WOOD FRAMING FASTENING SHALL BE IN ACCORDANCE WITH THE 2003 IBC, UNLESS NOTED OTHERWISE.
   B. ALL WOOD FRAMING AND STUDS TO BE #2 GRADE SPF OR BETTER, KILN DRIED TO 19% MAXIMUM MOISTURE CONTENT WITH THE FOLLOWING BASE DESIGN VALUES:
      EXTREME FIBER IN BENDING, REPETITIVE MEMBER USE, Fb=750 PSI
      HORIZONTAL SHEAR, Fv=130 PSI
      COMPRESSION PARALLEL TO GRAIN, Fc=1000 PSI
      MODULUS OF ELASTICITY, E=1,100,000 PSI
   C. ALL TRUSSES TO BE PRE-ENGINEERED AND FABRICATED IN A TPI APPROVED PLANS. SUBMIT STATE OF MAINE P.E. STAMPED SHOP DRAWINGS WITH CALCULATIONS FOR REVIEW PRIOR TO FABRICATION.
   D. BRACE ALL TRUSSES IN ACCORDANCE WITH SHOP DRAWINGS AND LATEST TPI STANDARDS.
3. CONCRETE:
   A. ALL CONCRETE WORK SHALL CONFORM TO ACI 318, LATEST EDITION.
   B. CONCRETE STRENGTH, f'c, 28 DAYS SHALL BE:
      3000 PSI FOR FOOTINGS AND WALLS
      3000 PSI FOR SLAB
   C. ALL WALL AND FOOTING CONCRETE SHALL HAVE 4-6% ENTRAINED AIR, ASTM C-260. SLABS TO HAVE NO ENTRAINED AIR.
   D. REINFORCING: ASTM A-615, GRADE 60, NEW DEFORMED BARS.
   E. WELDED WIRE FABRIC: ASTM A-185 FLAT SHEETS ON CONCRETE BRICK SUPPORTS AT 3'-0" O.C. EACH WAY.
   F. CONCRETE MATERIALS:
   PORTLAND CEMENT: ASTM C-150 TYPE I OR II
   NORMAL WEIGHT AGGREGATE: ASTM C-33, MAX SIZE ¾"
4. DOORS:
   A. DOORS: 1-¾" THICK, 18 GAUGE STEEL, FLUSH INSULATED STEEL DOORS STEEL FRAME AS MANUFACTURED BY STEEL-CRAFT OR EQUAL.
   B. HARDWARE: 3 PR. FULL MORTISE STAINLESS STEEL HINGES WITH NON-RISING PINS, BORED LOCKSET, DOOR CLOSER, WEATHER STRIPPING JAMBS AND HEADS AND THRESHOLD.
   C. ATTIC HATCH: PROVIDE 2' BY 3' CEILING OPENING AND HATCH FOR ATTIC ACCESS.
5. FINISH:
   A. EXTERIOR OF BUILDING TO BE VINYL SIDED. COLOR TO BE WHITE OR MEDIUM GRAY.
   B. DOORS: TWO(2) COATINGS OF GLIDDEN ALKYD INDUSTRIAL ENAMEL - SERIES 4500 COLOR TO BE SELECTED BY PORTLAND WATER DISTRICT.
   C. INTERIOR: TWO(2) COATINGS OF GLIDDEN ALKYD INDUSTRIAL ENAMEL - SERIES 4500 COLOR TO BE SELECTED BY PORTLAND WATER DISTRICT.
   D. SURFACE PREPARATION: SHALL BE IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS AND REQUIREMENTS.
6. ROOFING:
   A. SHINGLES SHALL BE MINERAL FIBERGLASS REINFORCED, GRANULE-SURFACED ASPHALT, SELF-SEALING, CONFORMING TO ASTM D3462. SHINGLES SHALL BE WARRANTED BY MANUFACTURER FOR MINIMUM OF 25 YEARS. SHINGLE COLOR SHALL BE SELECTED BY PORTLAND WATER DISTRICT.
   B. UNDERLAYMENT SHALL BE 15 POUND, ASPHALT-SATURATED FELT CONFORMING TO ASTM D226, TYPE I, WITHOUT PERFORATIONS AND SPECIFIED BY THE SHINGLE MANUFACTURER FOR USE AS UNDERLAYMENT.
   C. ICE AND WATER SHIELD SHALL BE INSTALLED ALONG THE FIRST SIX FEET OF THE ROOF, AT ALL EDGES.

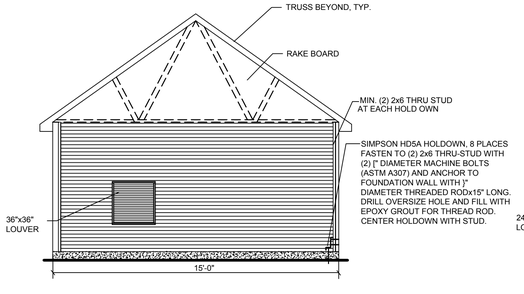
EAST ELEVATION
N.T.S.



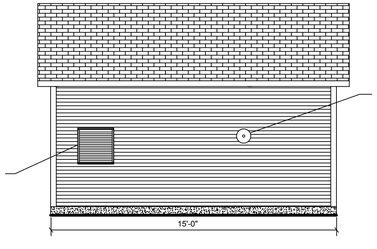
SOUTH ELEVATION
N.T.S.



PIPE PENETRATION DETAIL
NOT TO SCALE



WEST ELEVATION
N.T.S.



NORTH ELEVATION
N.T.S.

MAP 27 LOT 20
MAP 25 LOT 8
MAP 24 LOT 20 & 19

SHAWN M. FRANK, PE 6396

STATE OF MAINE * SHAWN M. FRANK No. 6396 * PROFESSIONAL ENGINEER
12-21-2023

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DESIGNED	JBP
DRAWN	STI
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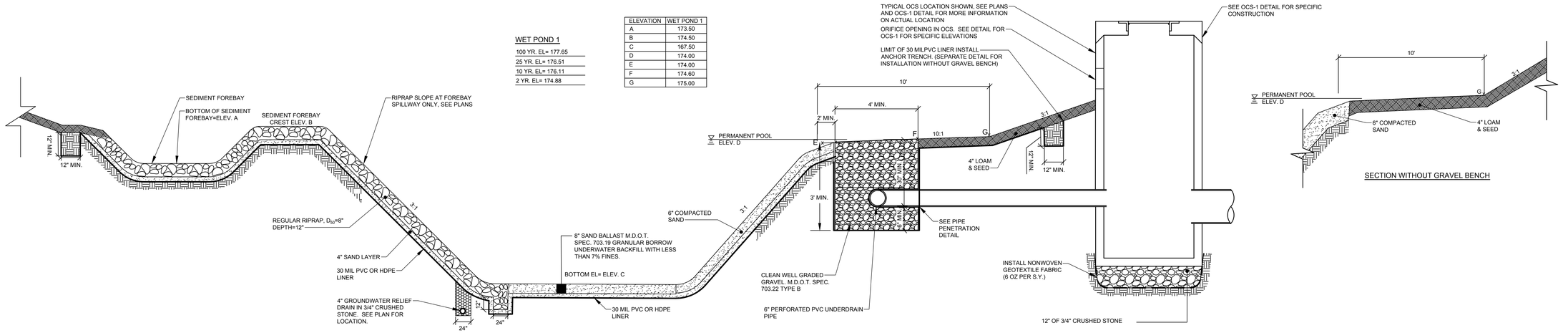
SCALE	NTS
PROJECT	21483

SHEET28 OF29

WET POND 1

100 YR. EL= 177.65
25 YR. EL= 176.51
10 YR. EL= 176.11
2 YR. EL= 174.88

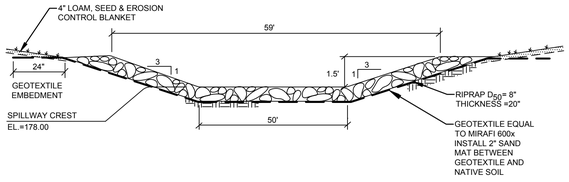
ELEVATION	WET POND 1
A	173.50
B	174.50
C	167.50
D	174.00
E	174.00
F	174.60
G	175.00



WET POND SECTION/ SAFETY BENCH/GRAVEL FILTER & OUTLET DETAIL

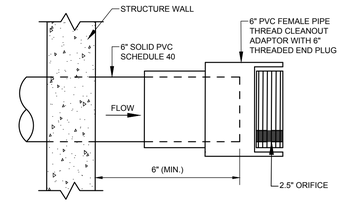
NOT TO SCALE

SECTION WITHOUT GRAVEL BENCH

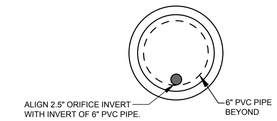


EMERGENCY SPILLWAY CROSS-SECTION

NOT TO SCALE



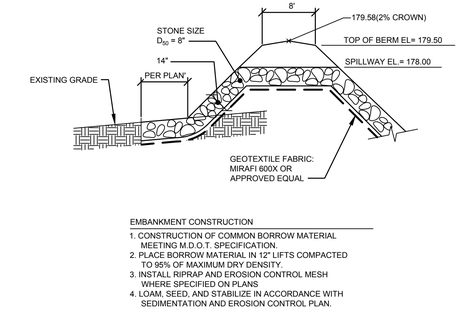
CONNECTION DETAIL



END DETAIL

FLANGE ADAPTOR DETAIL

NOT TO SCALE

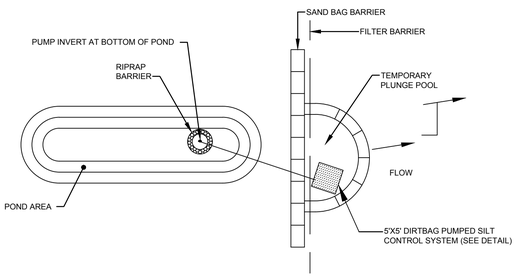


EMBANKMENT CONSTRUCTION

1. CONSTRUCTION OF COMMON BORROW MATERIAL MEETING M.D.O.T. SPECIFICATION.
2. PLACE BORROW MATERIAL IN 12" LIFTS COMPACTED TO 95% OF MAXIMUM DRY DENSITY.
3. INSTALL RIPRAP AND EROSION CONTROL MESH WHERE SPECIFIED ON PLANS
4. LOAM, SEED, AND STABILIZE IN ACCORDANCE WITH SEDIMENTATION AND EROSION CONTROL PLAN.

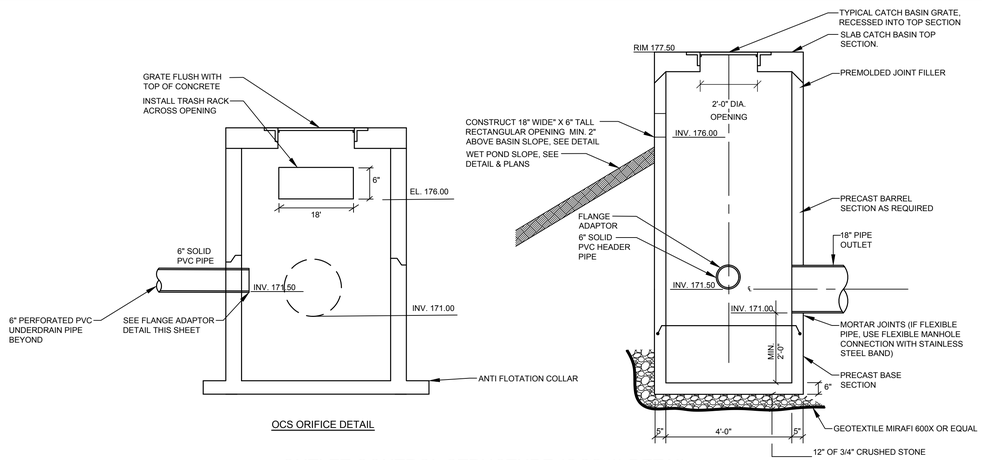
SPILLWAY SECTION

NOT TO SCALE



TEMPORARY POND DEWATERING DETAIL

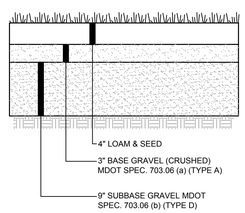
NOT TO SCALE



OUTLET CONTROL STRUCTURE (OCS-1) DETAIL

NOT TO SCALE

OCS ORIFICE DETAIL



WET POND ACCESS DRIVE CROSS-SECTION

NOT TO SCALE

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SHEET29 OF29

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